XXXIX Annual Congress
of
Indian Society for Veterinary Surgery
&
National Symposium
on

Recent Innovations in Diagnosis and Treatment of Surgical Disorders in Ruminants and Equines with Particular Applicability in Hilly Terrain

1-3 SEPTEMBER 2015, SRINAGAR (J & K)

Compendium of Abstracts
&
Souvenir

ORGANIZED BY

Division of Veterinary Surgery and Radiology
Faculty of Veterinary Sciences and Animal Husbandry
Sher-e-Kashmir University of Agricultural Sciences and Technology-Kashmir
Srinagar-190 006 (Jammu & Kashmir)

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Indian Society for Veterinary Surgery
&
National Symposium

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Recent Innovations in Diagnosis and Treatment of
Surgical Disorders in Ruminants and Equines with
Particular Applicability in Hilly Terrain

1-3 September, 2015

Organized by
Division of Veterinary Surgery and Radiology
Faculty of Veterinary Sciences and Animal Husbandry
Sher-e- Kashmir University of Agricultural Sciences and Technology, Kashmir
Srinagar-190 006 (Jammu and Kashmir)
in collaboration with

INDIAN SOCIETY FOR VETERINARY SURGERY, SRINAGAR CHAPTER

XXXIX Annual Congress of ISVS and National Symposium

Compendium of Abstracts and Souvenir

Compiled and Edited

by

Prof. D.M. Makhdoomi

ORGANIZING SECRETARY

XXXIX Annual Congress of ISVS and National Symposium
Faculty of Veterinary Sciences and Animal Husbandry
Shuhama, Srinagar, SKUAST-K

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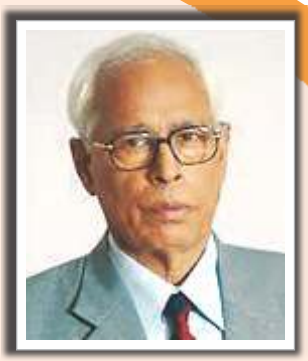


Message

I am happy to learn that Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir (SKUAST-K) is shortly organizing the 39th Annual Congress of ISVS and National Symposium on **"Recent Innovations in Diagnosis and Treatment of Surgical Disorders in Ruminants and Equines with Particular Applicability in Hilly Terrain"**

The animal sector, which comprises a very important element of the State's economy, needs to be urgently developed on a well-planned basis as the success of such initiatives will not only generate large scale employment for our growth but also save Rs. 1800-2000 crore which is spent annually in importing meat and poultry from outside the state.

I am informed that the National Symposium is likely to be attended by several hundred delegates from all over the country. I hope that the deliberations in the Symposium will result in the evolution of practical strategies for improving animal health which would contribute to speedy development of this important sector.

I congratulate the Vice Chancellor, SKUAST-K, and members of his team, for taking the initiative of organizing this National Symposium on an important subject.

N.N. Vohra

Chief Minister
Jammu & Kashmir

Message

I am glad to know that Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Faculty of Veterinary Sciences and Animal Husbandry, Division of Veterinary Surgery and Radiology is hosting 39th Annual Congress of Indian Society for Veterinary Surgery and National Symposium on **"Recent Innovations in Diagnosis and Treatment of Surgical Disorders in Ruminants and Equines with Particular Applicability in Hilly Terrain"** from 1 to 3 September, 2015 .

Livestock constitutes the vital component of agricultural economy and holds even greater promises for livelihood security in hilly and mountainous state like Jammu and Kashmir. Besides, their wild counterparts form the fulcrum of ecological balance. The health status of animals is an indicator of overall physical and economic health of a nation. The Annual Congress and National Symposium would serve as an opportunity for the Veterinarians and Animal Scientists from all over India and abroad to share their experiences and explore new avenues of research and development. The outcome of the event would add value to the quality of services rendered by the Veterinary Professionals and equip them well to meet emerging challenges especially under the changing geo-climatic conditions.

I convey my best wishes to all participants of this Annual Congress.

Mufti Mohammad Sayeed

Minister for Animal/Sheep Husbandry, and Science & Technology Jammu & Kashmir

Message

Jammu and Kashmir is a hill and mountain state with vast geo-climatic diversity that fosters a parallel biotic diversity of which animals and birds are an integral component. The shrinking biodiversity, partly due to geo-climatic events and largely due to human apathy is a matter of great concern. Livestock constitutes backbone of economic sustainability and livelihood security. 20% of the state population is directly dependent on livestock husbandry. They are the only tangible assets at times of scarcity, provide employment and help in elevating of socio-economic status.

It is heartening to know that Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir in collaboration with Indian Society for Veterinary Surgery is organizing National Symposium on **"Recent Innovations in Diagnosis and Treatment of Surgical Disorders in Ruminants and Equines with Particular Applicability in Hilly Terrain"** at the Faculty of Veterinary Sciences and Animal Husbandry from 1 to 3 September, 2015. Hosting national event like this, in the times when the state is framing the future policies for development in animal sector is a welcome step. Animal health is one of the great concerns of present times and the geo-political position of this state furthers such concerns. Extending critical care under field conditions in hills and mountains is a challenging job. The veterinarians at large have been highly devoted to their cause upholding animal ethics in tough times. I salute them for the services delivered to the animals. I am sure that the deliberations of eminent scientists in the profession of veterinary sciences and the young vibrant brains shall contribute greatly to the advancement and research in the sector. I hope that the recommendations shall go a long way in framing national and state policies vis-à-vis establishment of state of art health services for our animal counterparts.

I appreciate the organizers of the National Symposium in their endeavor and wish the venture a great success.

Sajad Gani Lone

Vice Chancellor
Sher-e-Kashmir
University of Agricultural
Sciences & Technology of Kashmir
Jammu & Kashmir

Message

I am happy to know that Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir is organizing the 39th Annual Congress of ISVS and National Symposium on **"Recent Innovations in Diagnosis and Treatment of Surgical Disorders in Ruminants and Equines with Particular Applicability in Hilly Terrain".**

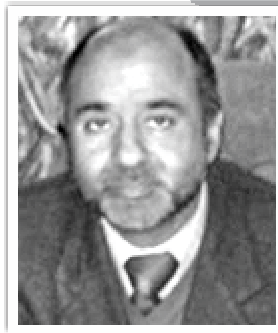
Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir has a mandate of imparting education and undertaking research and extension in the agriculture and allied fields. It has a privilege of being the only institution catering temperate and cold arid zones of India. The institution as a whole has taken lead in many areas of hill and mountain agriculture and is heading towards achieving excellence in this field. The institution has been organizing national events like this in the fields of Agriculture and Veterinary Sciences, but this is first of its kind in the field of Veterinary Surgery which provides critical care in events of emergency. I congratulate the Dean FVSc & AH and his team for their efforts.

Science has been growing very fast and virtually this is an era of knowledge explosion. Scientists and students in every specialized field need to keep track of advancements made in their field to exploit it for future. Animal health is of great concern ethically and professionally. Hills and mountains have its own specialized problems different from plains. Provision of critical care to animals is highly challenging. However, the technological advancements have made it possible to extend the medical support to the remotest corners. These have greatly facilitated enhancement of longevity, performance of the farm, companion as well as wild animals. In this scenario, the deliberations of the symposium will have a definite contribution to the benefit of livestock, the companion and other animals through knowledge dissipation and scientific interactions. This will also generate vigour among the youngsters, who I believe shall be benefited the most through interaction with the stalwarts of the field.

I wish the delegates a pleasant time during the Annual Congress.

Prof. Tej Pratap

Commissioner/Secretary
to Government Agriculture
Production Department
Jammu & Kashmir



Message

I feel happy to learn that Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Faculty of Veterinary Sciences and Animal Husbandry, is hosting the 39th Annual Congress of ISVS and National Symposium on **"Recent Innovations in Diagnosis and Treatment of Surgical Disorders in Ruminants and Equines with Particular Applicability in Hilly Terrain"** from 1 to 3 September, 2015.

Agriculture is the backbone of agrarian country like India. Livestock contributes immensely towards agricultural GDP. In hill and mountain state of Jammu and Kashmir, livestock constitutes the sole source of income for tribals like Bakarwals, Gujjars and Changpas, besides contributing to livelihood of small and marginal landholders. Extending animal health care to the distant pastures and difficult hilly terrains is a challenging task. Veterinarians have been serving these co-inhabitants of the planet with devotion. Recent past has witnessed great innovations in animal health care services. Holding symposia and conferences not only facilitates dissemination of information regarding newer developments in the related fields but also generates fresh impetus for furthering the development.

I wish great success for the congress.

Mohammad Ashraf Bukhari

Secretary to Government
Animal/Sheep Husbandry/
Science & Tech Department
Jammu & Kashmir

Message

I am glad to learn that Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Faculty of Veterinary Sciences and Animal Husbandry, is hosting the 39th Annual Congress of ISVS and National Symposium on **"Recent Innovations in Diagnosis and Treatment of Surgical Disorders in Ruminants and Equines with Particular Applicability in Hilly Terrain"** from 1 to 3 September, 2015.

Animal sector plays a vital role in economic sustainability as is evident from its contribution to national GDP. Besides, animal diversity also constitutes an important component of ecological stability. In recent past, there has been a paradigm shift in the outlook towards animal sector. The pets have been recognized as an important source of recreation and alleviating human stress. The rise in consciousness about animal ethics has heralded changes in veterinary medical setup globally especially with respect to critical care and emergency management. I hope the deliberations in the congress shall be helpful in furthering the development in veterinary clinical services and unfold the newer arenas in different areas of veterinary medical research.

I wish a happy and healthy time for the participants and great success for the congress.

Satesh Nehru, IAS

Divisional Commissioner
Kashmir
Srinagar-190 001

Message

I am glad to know that Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir is hosting 39th Annual Congress of Indian Society for Veterinary Surgery and National Symposium on **"Recent Innovations in Diagnosis and Treatment of Surgical Disorders in Ruminants and Equines with Particular Applicability in Hilly Terrain"** from 1 to 3 September, 2015

The livestock sector of J&K has a major potential to offer job opportunity and livelihood to majority of people. Livestock suffers from several diseases involving surgical conditions leading to heavy economic losses and great discomfort to afflicted animals. Overall disease scenario in hills/mountains is unique and surgical conditions are no exception. Animals serving humanity at high altitudes frequently suffer from conditions which are intensely agonising if the treatment is not extended under such field conditions. Recognizing the fact that greater the challenge bigger the opportunities, need of the hour is that the planners/executors have to move hand-in-hand to overcome all hurdles to establish a strong base for promoting the cause of professional services. I am confident that deliberations in the National Symposium shall highlight advancements made globally in the area of animal health delivery systems and boost the morale of our veterinarians and youth at large to promote the cause of livestock and farmers in the state.

I extend my heartiest welcome to delegates and wish the event to be a great success.

Dr. Asgar Hassan Samoon, IAS

Dean, Faculty of Veterinary Sciences & Animal Husbandry
Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir

Message

It is a matter of great privilege that the Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir is hosting the 39th Annual Congress of ISVS and National Symposium on **"Recent Innovations in Diagnosis and Treatment of Surgical Disorders in Ruminants and Equines with Particular Applicability in Hilly Terrain".**

Faculty of Veterinary Sciences has been growing to achieve excellence in teaching, research and extension. In recent past, scientists of the Faculty have exhibited their competence as leaders of prestigious national consortium projects, and in producing world's first pashmina goat clone "NOORI". The alumni of the Faculty have brought laurels to the institution by excelling at national competitive examination conducted by ICAR for PG admissions. For last five years, 100% students have qualified the examination with 46.51% getting JRFs and many of them topping in the merit list. Organizing a national event like this adds another milestone in the glory of this institution. I am fully aware of the herculean task involved to organize this national event and Prof. D.M. Makhdoomi has taken a lead in this endeavour. I appreciate the efforts of Prof. Makhdoomi and his team.

The theme chosen by the organizers is highly appropriate and I am sure that the deliberations of the symposium will go long way in achieving improved health care of animals. Such Professional's convention will provide an opportunity to the Students, Faculty, Scientists and Practicing Veterinarians to interact and to get acquainted with the latest knowledge generated across the country. I understand that a commemorative volume of efforts and ideas are put together to celebrate the occasion.

On behalf of the Faculty of Veterinary Sciences and Animal Husbandry, I extend my best wishes and warm greetings to all the participants.

Prof. Sarfaraz Ahmad Wani

President
Indian Society for Veterinary Surgery
21-A, Raja Basanta Roy Road
Kolkata - 700 026 (W.B.)

Message

As the President of Indian Society for Veterinary Surgery (ISVS), I feel immense pleasure to have an opportunity to be with you and sharing the happy moments of this event. The Indian Society for Veterinary Surgery came into existence on 28th October 1977 at Hisar with an aim to provide common platform for members to exchange scientific knowledge in the field of Veterinary Surgery and Radiology. During last 39 years, Veterinary Surgery has made commendable contributions by developing surgical techniques to tackle major surgical problems. To involve greater number of surgeons from field and disseminate the technology to benefit the rural farmers, it is a good step to activate the State Chapter.

I congratulate the Organizing Committee of the 39th Annual Congress of Indian Society for Veterinary Surgery and National Symposium on **"Recent Innovations in Diagnosis and Treatment of Surgical Disorders in Ruminants and Equines with Particular Applicability in Hilly Terrain"** to organize it at Division of Veterinary Surgery & Radiology, Faculty of Veterinary Sciences & Animal Husbandry, Sher-e-Kashmir University of Agricultural Sciences & Technology, Kashmir from 1-3 September, 2015.

I am not only hopeful but confident that 39th Annual Congress of ISVS and National Symposium at Srinagar will discuss and highlight the outcome of research in various topics on Recent Innovations in Diagnosis and Treatment of surgical Disorders in Ruminants and Equines under different technical sessions.

I am also happy to learn that a Souvenir is being brought out to commemorate this occasion.

I wish this symposium a grand success.

Dipak Kumar De

Dipak Kumar De
President ISVS
B.V.Sc.&A.H., M.V.Sc., Ph.D. Surgery and Radiology

Organising Secretary
39th Annual Congress and
National Symposium of ISVS

Message

Kashmir, famous for its patronization and development of knowledge culture or in modern terms, knowledge economy and earning the epithet Vidya Peeth or Shardha Peeth, has the history of conducting mega conferences on pioneering issues from ancient Buddhist period. Combining spiritual and knowledge tourisms is a new idea that has been enticing me for quite some time. The present conference is an attempt to both connect to our great legacy as centre of international learning in philosophy and religion and expand the horizons of the same by including scientific and technical issues. Given the pivotal importance to livestock sector in predominantly agricultural economy of India and especially for mountainous and landlocked regions, it has been envisaged to put our efforts in the face of stated objective of promoting knowledge economy by investing in what we may call knowledge tourism linked to development of livestock sector.

Veterinary surgery has enormously developed in recent years as part of the kitty of solutions to treatment of animals and thanks to increasing per capita income and recognition of significance of saving animal lives as part of the national project of growth of economy and for other cultural reasons besides increasing emphasis on development of consciousness regarding animal rights. Mountain states have been especially earmarked in national policy for livestock development. Livestock is not only an integral part of traditional cultural and religious spaces but religious and secular tourism of the State of J & K. From Amarnath Yatra to urs festivals in shrines in this land of saints, from barbeques to routine official and nonofficial functions including birth, death, marriage, birthdays etc. that form the warp and woof of our culture and economy. It is livestock, especially ruminants and hosres that hold the key from the cold desert of Ladakh to plains of valley and Jammu. Veterinary Surgery has increasing importance due to nomadic and pastoral mode of livestock rearing in Kashmir making animals prone to accidents and other emergencies that would otherwise cost lives for want of immediate intervention.

It gives me immense joy to be part of the endeavour to organize the first All India Congress of Veterinary Scientists in Surgery at Srinagar. Veterinary Surgery has recently registered great growth thanks to variety of reasons and it is the responsibility of Veterinary Scientific community to accept the challenges and provide better and ingenuous solutions to farmers under field conditions in largely unorganized sector that livestock rearing is. I hope we will be able to review existing scenario and work towards expanding new horizons in the field of veterinary surgery and become increasingly competitive in a world where saving animal lives is getting increasingly attention and economy of a farmer closely tied up to the life of a dairy cow or horse or sheep that has become quite costly to allow any complacency on the part of Veterinary Surgeon. I hope this Congress will script new history in the area of professional development in the State and its impact will be felt widely across states and hopefully beyond country.

Prof. Dil Mohammad Makhdoomi

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Amresh Kumar	:	1994-95			

PROGRAMME

1-9-2015

S. No.	Time	Event	Venue
1.	7.00 a.m.	Registration	In Respective Hotels
2.	8.00 a.m.	Breakfast	Hotel
3.	10.00 a.m.	Inauguration	Nund Reshi Auditorium
4.	11.30 a.m.	Tea	Auditorium Lawns
5.	12.00 noon	Theme Session	N.R. Auditorium
6.	1.00 p.m.	Lunch	SKUAST-Kashmir
7.	2.00 p.m.	Technical Sessions:	
		Orthopaedic Surgery	N.R Auditorium
		Anaesthesiology	Seminar Hall 1
		Zoo and Wild Life Surgery	Seminar Hall 2
		Equine Surgery	Seminar Hall 3
8.	4.00 p.m.	Hands on Training	Small Ruminants/ Wild life/Bakarwal Flock
9.	6.00 p.m.	Cultural Programme	N.R Auditorium
10.	8.00 p.m.	Dinner	Hotel

2-9-2015

S. No.	Time	Event	Venue
1.	8.00 a.m.	Breakfast	Hotel
2.	9.00 a.m.	Technical Sessions:	
		Small Animal Surgery	N.R Auditorium
		Ruminant Surgery	Seminar Hall 1
		Avian Surgery	Seminar Hall 2
		Radiology and Imaging Techniques	Seminar Hall 3
3.	11.00 a.m.	Tea	Auditorium Lawns
4.	11.30 a.m.	Hands on Training	Visit to Equine Owners and Treatment of Lameness
5.	8.00 p.m.	Dinner	Hotel

3-9-2015

S. No.	Time	Event	Venue
1.	8.00 a.m.	Breakfast	Hotel
2.	9.00 a.m.	Poster Session Small and Large Animal	N.R Auditorium
3.	10.30 noon	Planery Session	N.R Auditorium
4.	11.30 a.m.	Tea	Auditorium Lawns
5.	12.00 noon	Valedictory Function	N.R Auditorium
6.	1.00 p.m.	Lunch & General Body Elections	Moghul Gardens

CONTENTS

THEME SESSION

No of Papers	**:**	**3**
Speaker	**:**	**Prof. A M Pawde**
		Prof. Vassanth S
		Dr. Nitin Bhatia
Chairman	**:**	**Prof. S Thilagar**
Co-Chairman	**:**	**Prof. O Ramakrishna**

Minimally Invasive Veterinary Orthopaedic Surgeries as a Better Option

A. M. Pawde
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

Embracing minimally invasive surgery, particularly for orthopaedic procedures can be more humane to the patient and attractive to the owner. Recognition of the benefits of arthroscopic surgery in the animals soon after its introduction in humans is typical of the early adoption and development of minimally invasive approaches by veterinary surgeons. Majority of joint procedures in animals are now performed arthroscopically. Minimally invasive surgery is any surgical technique that is less traumatic to the body, requiring much smaller incisions, than the traditional 'open' procedure. With this definition, the question of whether it is better can only be answered by direct comparison of the outcomes of traditional open procedures with a specific minimally invasive alternative. Unfortunately, evidences related to compare procedures, have not been performed in equine surgery for us to know whether minimally invasive techniques are superior to traditional open procedures. Human orthopedic surgeons have embraced minimally invasive techniques, probably often due to pressures from their patients for less scarring and better cosmetic results. Some of the evident advantages of minimally invasive surgery include reduced tissue trauma, reduced operative time, reduced post-operative pain and analgesic use, reduced hospital stay, reduced infection rate, reduced cost, faster return to function and better long term outcome with less scarring. Among animals, horse is very much suited for minimally invasive approaches to fracture repair, joint surgery, arthrodesis and other procedures due to the lack of soft tissue coverage of the distal limbs and the preponderance of injuries that occur in the distal limb locations. The need of the hour is to have randomized trials to compare traditional techniques with the minimal invasive techniques so that these dumb creatures are treated in the best way possible.

Stem Cells in Veterinary Surgery

M. S. Vasanth
Dean, Veterinary College, Hassan (Karnataka)

The stem cells to have an immense impact on the way the diseases and disorders will be treated in the years to come. One of the most widely used stem cell therapy has been the bone marrow transplant. Tremendous progress has been achieved to develop various sources of stem cells. Research is underway to develop various sources for stem cells, and to apply stem cell treatments for neurodegenerative diseases and conditions, diabetes, heart disease, and other conditions. Stem cell therapy is the use of stem cells to treat or prevent a disease or condition. With the ability of scientists to isolate and culture embryonic stem cells, and with scientists' growing ability to create stem cells using somatic cell nuclear transfer and techniques to create induced pluripotent stem cells. The Stem Cell therapy for various conditions shall be explained in detail.

Lipid based Nanosomal Veterinary Therapeutics in Veterinary Practice

Nitin Bhatia
Intas Animal Health
Intas Pharmaceuticals Limited, 4th Floor, Premier House,
Sarkhej Gandhinagar Road, Bodakdev, Ahmedabad (Gujarat)

In the recent years, the application of nanotechnology in human and veterinary medicine has shown a great progress. Scientists foresee that this progress in the field of nanotechnology could represent a major breakthrough in addressing some of the technical challenges faced by human and veterinary profession. While the great hopes of nanomedicine are disease detection and new pharmaceuticals for humans, veterinary applications of nanotechnology may become the proving ground for untried. Nanotechnology has the potential to impact not only the way we live, but also the way we practice veterinary medicine. Examples of potential applications in animal agriculture and veterinary

medicine include disease diagnosis and treatment delivery systems, new tools for molecular and cellular breeding, the security of animal food products, modification of animal waste, pathogen detection, and many more. Existing research has demonstrated the feasibility of introducing nanoshells and nanotubes into animals to seek and destroy targeted cells. Nanotechnology has the potential to create many new materials and devices with a vast range of applications, such as in medicine, electronics, biomaterials and energy production.

The use of nanotechnology in medicine offers some exciting possibilities. Some techniques are only imagined, while others are at various stages of testing, or actually being used today. Nanosomal Lipid delivery system is yet another upcoming medical technology that was developed for use in chemotherapy as a delivery system to improve bioavailability and absorption of the medication. Nanosomal lipid delivery system assist in better absorption into skin and other lipid based organs as well as assist in drug delivery especially in case of oncology, where majority of side effects are reported because of the polysorbate-80, ethanol and other vehicle system in use. Lipid based anti-cancer products are devoid of these side effects and also ensure superior efficacy.

Intas is an innovator of this patented technology 'Nanoaqualip'. Nanoaqualip is a New Drug Delivery System (NDDS) technology applied to number of human and veterinary products offering benefits in terms of better safety, devoid of vehicle based side effects and better solubility of non water soluble drugs. Nanoaqualip based products offer better penetration, high bioavailability and superior efficacy. The technology has been extended to companion animals and the first product of the same has just made its way in the Indian animal health market as 'Takfa pet'. A NDDS product for atopic dermatitis in companion animals with tacrolimus, calcineurin inhibitor with potent anti-inflammatory properties. Trials suggest the potency, superiority and safety of the formulation and is the first of its kinds adaptation of nanotechnology in Veterinary therapeutics. Many more technological advances would pave way for veterinary practice and surgery with ophthalmic and oncology products.

ANAESTHESIOLOGY

No. of Abstracts	:	21
No. of Lead Papers	:	01
Lead Paper Speaker	:	Dr. S. Senthil Kumar
Chairman	:	Prof. J.M. Nigam
Co-Chairman	:	Dr. Amresh Kumar
Rapporteur	:	Dr. A.K. Das

ANS 1: Anaesthetic Considerations in Caesarean Section in Bitch and Queen

Swarupananda Sahu and Rekha Pathak
Division of Surgery, Indian Veterinary Research Institute, Bareilly (U.P.)

A Caesarean section is an emergency type of obstetrical manipulation in companion animals also. Most of the anaesthetics having the ability to cross the placenta and will reach the foetus (though not all at similar concentrations). Epidural anaesthesia can be used successfully for caesarean sections as there is minimal foetal exposure to anaesthetics and the pups are more vigorous at birth. But problems with this method include lack of airway protection, hypotension, full consciousness and frequent need for repeated sedation. General anaesthesia is a common protocol for cesarean sections in dogs and is preferred over epidural protocols. Propofol, etomidate, alfaxalone, sevoflurane and isoflurane have been shown to be associated with less maternal and foetal mortality. Protocols that use alpha2-agonists, ketamine hydrochloride, or methoxyflurane should be avoided because they have been associated with increased mortality in both bitch and foetus.

ANS 2: Clinicophysiological and Haematobiochemical Effects of Dexmedetomidine and their Combination with Ketamine and Ropivacaine for Tube Cystostomy in Urolithic Buffalo Calves

Deepesh Gautam, P. Kinjavdekar, Amarpal, H.P. Aithal, A.M. Pawde, Rohit Kumar, S.K. Patra, A.R. Bhat Sivanarayan T.B., Divya Mohan, M.A. Shah and Ravinder Singh
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The study was conducted on clinical cases of 15 male buffalo calves of 3-4 months age, weighing 40-50 kg body weight, suffering from urolithiasis, subjected for tube cystostomy. Animals were divided into three groups having five animals each. Where, in group D (dexmedetomidine) @7.5 µg/kg, in group DK (dexmedetomidine and ketamine) @ 3.75 µg /kg and 2 mg/kg and group RDK (ropivacaine, dexmedetomidine and ketamine) @ 0.02 mg/kg, 2.5µg/kg and 2 mg/kg) were injected at lumbosacral subarachnoid space. Group D produced delayed onset and shorter duration of subarachnoid analgesia as compared to group RDK and RK. RDK provides better extent and depth of subarachnoid analgesia than D and DK group. D, DK and RDK produce only transient and minor changes in haematobiochemical and physiological observations and therefore, considered safe for tube cystostomy in urolithic buffalo calves.

ANS 3: Comparative Evaluation of Dex-Mid-But with and without Vecuronium Bromide on Propofol and Isoflurane Anaesthesia in Buffaloes

Rohit Kumar, P. Kinjavdekar, Amarpal, H.P. Aithal, A.M. Pawde, Madhu, D.N., Sivanarayanan T.B., D. Gautam, P. Dubey, Anujpratapsingh and I. P. Sarode
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The study was conducted in six clinically healthy male buffaloes divided into two groups. In both the groups, sedation was accomplished by dexmedetomidine (5.0 ìg/kg), midazolam (0.25 mg/kg) and butorphanol (0.05 mg/kg) intravenously. In both the groups, induction was done by 1% propofol 'to effect' and maintained by isoflurane in 100% oxygen using a large animal anaesthetic machine. However, in group B, vecuronium (50.0 µg/kg) was injected intravenously 5 minutes after induction with propofol. Vecuronium bromide after induction of anaesthesia with propofol provided better muscle relaxation as compared to its respective group. Addition of vecuronium bromide in anaesthetic protocol is safe and associated with better clinicophysiological, haemodynamic stability and dose sparing of isoflurane as compared to its respective groups and can be used without assisted ventilation and may be recommended for clinical use in buffaloes.

ANS 4: Comparison of Haematobiochemical Effects of Midazolam and Dexmedetomidine as Preanaesthetic Agents and Ketamine and Propofol as Induction Agents for General Anaesthesia in Bovines

Hunny Goyal, Tarunbir Singh, Pallavi Verma, Narinder S. Saini, Jatinder Mohindroo and Chanchal Singh
Department of Veterinary Surgery and Radiology, GADVASU, Ludhiana (Punjab)

The study was conducted in 38 bovines (37 buffaloes and one cattle) presented for the repair of diaphragmatic hernia. Preanaesthetic protocol included butorphanol (0.05 mg/kg, IV) and midazolam (0.2 mg/kg, IV) in Group I and II or butorphanol (0.05 mg/kg, IV) and dexmedetomidine (1.5 ìg/kg) in Group III and IV. Anaesthesia was induced by ketamine (5.0 mg/kg, IV) in Group I and III or propofol (2.0 mg/kg) in Group II and IV. Base values of DLC showed mild increase in neutrophils and decrease in lymphocytes. BUN and AST increased while a decrease in glucose, total protein and albumin was observed. During anaesthesia; Hb, PCV and TLC fluctuated below the base levels in all the groups. A non-significant increase in the neutrophils and decrease in lymphocytes were the major alterations Different anaesthetic combinations were found to be safe for the use in routine clinical cases in severely compromised patients.

ANS 5: Detomidine and Detomidine-Ketamine Anaesthesia in Swine

Jodumoni Kachari and Bhupen Sarma
Department of Veterinary Surgery and Radiology, College of Veterinary Science
Khanapara, Assam Agricultural University, Guwahati (Assam)

The study was conducted to see the effects of detomidine and detomidine-ketamine in 12 clinically healthy pigs by injecting detomidine (30.0 µg/kg, IM) and detomidine-ketamine (30.0 µg/kg and 10.0 mg/kg, IM) in group A and group B respectively. The mean induction time of anaesthesia in both the groups were recorded to be 5±1.06 and 2.5±0.46 minutes respectively. Duration of anaesthesia was 15±1.47 and 51.5±2.48 minutes and recovery time was 29.66±2.13 and 69.16 ± 1.57 minutes in both the groups respectively. In group B, induction and recovery were smooth as compared to group A. In group B, pigs exhibited balanced anaesthesia, while the pigs of group A indicated inadequate anaesthesia exhibiting retching, paddling and grunting. Detomidine-ketamine produced surgical anaesthesia for longer durations; while the sedation produced by detomidine alone was not sufficient for longer durations.

ANS 6: Effect of Midazolam and Midazolam-Butorphanol with Dexmedetomidine Premedication on Propofol and Isoflurane Anaesthesia in Buffaloes

Rohit Kumar, P. Kinjavdekar, Amarpal, H.P. Aithal, A.M. Pawde, D.N. Madhu, T.B. Sivanarayanan
D. Gautam, P. Dubey and Anuj Pratap Singh
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The study was conducted in six clinically healthy male buffaloes. The animals were divided into three groups A, B and C. In group A sedation was accomplished by administering dexmedetomidine (1 ìg/kg), in group B by dexmedetomidine (1 ìg/kg) and midazolam (0.25 mg/kg), while in group C by dexmedetomidine (5 ìg/kg), midazolam (0.25 mg/kg) and butorphanol (0.05 mg/kg) intravenously. In all groups, induction was done by 1% propofol 'to effect'. Maintenance of anaesthesia was made by isoflurane in 100% oxygen using a large animal anaesthetic machine. Midazolam (0.25 mg/kg) or midazolam-butorphanol (0.25 mg/kg - 0.05 mg/kg) with dexmedetomidine (1.0 µg/kg) intravenously, provides better quality sedation, analgesia and muscle relaxation and associated with more dose sparing effect on propofol used for induction and isoflurane used for maintenance as compared to dexmedetomidine alone in buffaloes. Midazolam or midazolam-butorphanol with dexmedetomidine with propofol and isoflurane provided clinicophysiological and haemodynamic stability in buffaloes.

ANS 7: Effect of Ventilation for the Maintenance of Blood Gas and Acid Base Parameters in Bovine Patients Subjected to General Anaesthesia

M.S. Buttar, Tarunbir Singh, J. Mohindroo, N.S. Saini, Pallavi Verma and Vandana Sangwan
Department of Veterinary Surgery and Radiology, GADVASU, Ludhiana (Punjab)

The study was conducted in fifty bovines presented for repair of diaphragmatic hernia. Animals were anaesthetised with butorphanol-midazolam-ketamine. Anaesthesia was maintained by isoflurane (2 to 2.5 %) in oxygen. A significant decrease in pH was observed in all the animals of three groups. At the start of ventilation, pH (7.24±0.03 in group I, 7.20±0.05 in group II and 7.18±0.04 in group III) were significantly below the respective base levels. A significant improvement in pH was observed after start of ventilation. After inducing anaesthesia and taking animal to dorsal recumbency, pCO2 was significantly higher in all the groups. Decrease in pCO2 was observed during the progression of ventilation. After induction of anaesthesia, decrease in PaO2 was observed in all the groups. At the time of start of ventilation, PaO2 values were significantly below the base values. Improvement in PaO2 was seen after starting IPPV so that intraoperative values remained higher than base levels. Similarly, increase in bicarbonate was observed. Bicarbonates during maintenance of ventilation remained stable. Decreased arterial blood pressure and depression in pulse rate were the major haemodynamic alterations in animals subjected to general anaesthesia in dorsal recumbency.

ANS 8: Effects of Midazolam and Dexmedetomidine with Thiopentone Total Intravenous Anaesthesia (TIVA) on Clinicophysiological Parameters in Canine Aural Hematoma Surgeries

Mudasir Ahmad Shah, Abas Rashid Bhat, Prakash Kinjavdekar and Deepesh Gautam
Division of Veterinary Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The study was conducted in 8 adult dogs, divided into two equal groups, presented for aural hematoma surgeries. Atropine (0.04 mg/kg, IM) followed by midazolam (0.25 mg/kg, IV) and butarphanol (0.2 mg/kg, IM) were administered in the group A, whereas in group B dexmedetomidine (10.0 µg/kg, IM) was given instead of midazolam with other preanaestheics remaining the same as group A. Induction and maintenance of anaesthesia was done by thiopentone (5%) intravenously in both the groups. Rectal temperature decreased significantly in both the groups. Group B showed a significant decrease in thiopentone dosage along with smooth induction and recovery as compared to group A. Dexmedetomidine as preanaesthetic has dose sparing effect on thiopentone than midazolam but recovery was prolonged in dexmedetomidine group in canine aural hematoma surgeries

ANS 9: Evaluation of Xylazine-Propofol and Midazolam-Propofol for induction of General Anesthesia and Maintenance with Isoflurane in Cattle

Basavaraj M.D., Dilipkumar and B.V. Shivaprakash
Department of Veterinary Surgery and Radiology, KVAFSU, Bidar (Karnatka)

The study was conducted in 12 clinical cases divided into two groups to evaluate xylazine-propofol and midazolam-propofol under isoflurane anaesthesia in cattle. Group-I animals were anaesthetized with xylazine (0.08 mg/kg, I/V) and propofol (3.0 mg/kg, I/V) induction combinations and maintenance was done with isoflurane (1-2%). Group-II animals were anaesthetized with midazolam (0.4 mg/kg, I/V) and propofol (3.0 mg/kg, I/V) and maintenance was done with isoflurane (1-2%). Group-I animals were subjected to surgical procedures viz. removal of growth on sclera, horn fracture repair, removal of neoplastic mass on limbus, ventral hernia repair, growth on limbus and removal of scirrhous cord. Group-II animals were subjected to surgical procedures viz. to correct growth on medial side of left horn, diaphragmatic hernia repair, removal of growth around the base of the horn, pericarditis repair, removal of growth at base of the horn and olecrenon process of ulna fracture repair.

The anaesthetic combinations used in group-I viz. xylazine – propofol induction and isoflurane maintenance and in group-II viz., midazolam-propofol induction and isoflurane maintenance were found to be suitable for various surgical procedures in clinical cases.

Ans 10: Evaluation of Acepromazine-Ketamine as an Anaesthetic Combination in Buffalo Calves

Chander Vijay Pal, Ashok Kumar, Sukhbir Singh, **Sandeep Potliya** and Sandeep Kumar
Department of Veterinary Surgery, College of Veterinary Sciences, LUVAS, Hisar (Haryana)

The study was undertaken in six male buffalo calves to evaluate acepromazine (0.15 mg/kg, IM)-ketamine (2.0 mg/kg, IV) anaesthesia. Ataxia with decreased spontaneous motor activity was seen after acepromazine administration. There was relaxation of prepuce and scrotum after acepromazine administration. Transient apnoea was observed in two animals after ketamine administration. Loss of auditory reflex and swallowing reflex occurred and analgesia was observed on fetlock joints, abdomen, base of horn, tail and ribs after administration of ketamine. Complete recovery took 39.83±2.31 minutes of ketamine administration. A significant decrease in Hb (9.55±0.29 g/dl) and PCV (30.00±1.20 %) was observed at 15 minutes of acepromazine administration till recovery. There was a significant hyperglycaemia (77.37±3.72 mg/dl) at 5 minutes of ketamine which further increased at recovery. There was a significant hypernatraemia during anaesthesia. Acepromazine-ketamine may safely be used for short duration anaesthesia with minimal alterations in blood biochemical parameters.

Ans 11: Evaluation of Efficacy and Safety of Atropine-Xylazine-Propofol Anaesthesia in Buffalo Calves

Sandeep Potliya, **Ashok Kumar,** Sukhbir Singh and Sandeep Kumar
Department of Veterinary Surgery, College of Veterinary Sciences, LUVAS, Hisar (Haryana)

The study was conducted on six male buffalo calves to evaluate atropine (0.04 mg/kg, IM)-xylazine (0.1 mg/kg, IM)-propofol (1.5 mg/kg, IV). Muzzle and nostrils became dry at 16.33±2.02 minutes of atropine. A decrease in spontaneous activity was seen with weak time of 5.17±1.60 minute and down time of 12.67±1.21 minute after xylazine administration. Loss of swallowing reflex occurred at 1.5±0.07 minutes after propofol administration. There was complete analgesia at fetlock, base of tail, abdomen, ribs periosteum and base of horn. Complete recovery took 108.0±9.75 minutes. Heart rate increased significantly at 15 minute of atropine (74.33±8.85 beats/minute). There was a decrease in respiratory rate at 5 minute of propofol. There was a significant increase in plasma glucose at 15 minute of xylazine which remained significantly higher till recovery. Chloride level increased significantly at 15 minute of xylazine. Atropine-xylazine-propofol anaesthetic combination may safely be used for short duration anaesthesia in buffaloes.

ANS 12: Evaluation of Propofol as Constant Rate Infusion for Maintenance of Anaesthesia in Horses Pre-Medicated with Different Combinations

A.K. Kasoudhan, B. Singh, V. Malik and M. K. Chaurasia
Department of Veterinary Surgery and Radiology, DUVASU, Mathura (U.P.)

The study included four groups on 8 clinical as well as experimental animals-Group A-acepromazine (0.02 mg/kg)+xylazine (0.5 mg/kg), Group B xylazine (0.5 mg/kg)+diazepam (0.1 mg/kg), Group C acepromazine (0.02 mg/kg)+butorphanol (0.02 mg/kg)+xylazine (0.5 mg/kg) Group D-butorphanol (0.02 mg/kg)+xylazine (0.5 mg/kg)+diazepam (0.1 mg/kg) in D group of animals. Induction of anaesthesia was achieved by combination of xylazine and ketamine intravenously in ratio of 3:5 by weight. Maintenance of anaesthesia was done by constant rate infusion of 1% propofol for 30 minutes. Group B was found better preanaesthetic and had less depression of

cardiopulmonary system compared to other groups. Significantly lesser doses of xylazine and ketamine for induction of anaesthesia were observed in B group compared to other groups. The required infusion rates of propofol to maintain the adequate depth of anaesthesia in A, B, C and D groups were 0.159±0.014, 0.145±0.026, 0.112±0.016 and 0.073±0.007 mg/kg/min, respectively.

ANS 13: Evaluation of Triflupromazine-Ketamine as Anaesthetic Combination in Buffalo Calves

Chander Vijay Pal, Ashok Kumar, **Sandeep Potliya,** Sukhbir Singh and Sandeep Kumar
Department of Veterinary Surgery, College of Veterinary Sciences, LUVAS, Hisar (Haryana)

The study was conducted to evaluate the triflupromazine (2.5 mg/kg, IM)-ketamine (2.0 mg/kg, IV) combination in six male buffalo calves. All the animals showed decreased spontaneous motor activity with ataxia after triflupromazine administration. A transient apnoea was observed in four animals after ketamine administration. Complete recovery took 40.17±1.96 minutes of ketamine. A significant increase in heart rate (80.83±4.54 beats/minute) was observed at 5 minutes of ketamine There was a significant decrease in respiratory rate (14.83±1.14 breaths/minute) at 15 minutes of triflupromazine and at 5 minutes of ketamine (13.17±0.40). A significant decrease in Hb (8.93±0.21 mg/dl) and PCV (27.67±0.67%) was observed at 5 minutes of ketamine. There was a significant hyperglycemia. Sodium decreased significantly at 5 minutes of ketamine. The aspartate amino transferase increased significantly at 24 hours of triflupromazine. The gamma glutamyl transpeptidase was significantly low at recovery. Triflupromazine-ketamine may safely be used for short duration anaesthesia in buffalo calves.

ANS 14: Evaluation of Vecuronium with Propofol Total Intravenous Anaesthesia (TIVA) in Canine Orthopaedic Surgeries

Abas Rashid Bhat, Abhijit M. Pawde, Sarit K. Patra, Deepesh Gautum, Deepika Bist, Anwarul Hassan Rohit Kumar, Amarpal and Prakash Kinjavedakar
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The study was conducted in 12 dogs to evaluate vecuronium with propofol anaesthesia for orthopaedic surgeries. Atropine (0.04 mg/kg, SC)-diazepam (0.5 mg/kg, IV)-pentazocine (1.5 mg/kg, IV) were administered in both the groups. Induction and maintenance of anaesthesia was done by propofol (1%) intravenously. Additionally in group B, at the time of incision when the surgical plane of anaesthesia was attained, vecuronium (0.04 mg/kg) was given intravenously. Complete jaw relaxation was recorded in group B and than A. 80 to 90 % neuromuscular blockade was observed in group B and absence of neuromuscular blockade in group A. The recovery time was significantly lower in group B than A. Heart rate increased non significantly, whereas, blood pressure decreased in both the groups. Respiration rate decreased significantly in group B. Rectal temperature decreased significantly in group A. Vecuronium may be used to enhance muscle relaxation produced by propofol.

ANS 15: Evaluation of Vecuronium with Thiopentone Total Intravenous Anaesthesia (TIVA) in Canine Orthopaedic Surgeries

Abas Rashid Bhat, Abhijit M. Pawde, Amarpal, Prakash Kinjavedakar, M. Hoque, H.P. Aithal, Sarit K. Patra, Santhi J. Lekshmi S.R., Rohit Kumar, Irawati P. Sarode and Divya Mohan
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

A study was conducted in 12 dogs presented for orthopaedic surgeries to evaluate the vecuronium with thiopentone anaesthesia. Atropine (0.04 mg/kg, SC)-diazepam (0.5mg/kg, IV)-pentazocine (1.5 mg/kg, IV) were administered in both the groups. Induction and maintenance of anaesthesia was done by thiopentone sodium (5%) intravenously. Additionally in group B, vecuronium (0.04 mg/kg) was given intravenously. Complete jaw relaxation

was recorded in group B and than A. 80 to 90 % neuromuscular blockade in group B was observed. Maintenance doses of thiopentone decreased non-significantly in group B. The recovery time was significantly lower in group B. Heart rate and blood pressure increased non-significantly in both the groups after the induction of anaesthesia. Respiratory rate decreased significantly in group B. Rectal temperature decreased significantly in both the groups. Vecuronium may be used with thiopentone anaesthesia to increase muscle relaxation.

ANS 16: Haemato-Biochemical Effects of Bupivacaine alone and in Combination with Xylazine and Pentazocine for Lumbar Epidural Anaesthesia in Buffalo Calves

G.S. Netty, Raju Sharda, S.K. Tiwari, R. Dewanganand and M.O. Kalim
Department of Veterinary Surgery & Radiology, CVSAH, Anjora, Durg (C.G.)

The study was undertaken in eighteen male buffalo calves divided into three groups of six animals each. The animals of group A were treated with lumbar epidural injection of bupivacaine (0.15 mg/kg), group B with bupivacaine(0.15 mg/kg) along with xylazine (0.05 mg/kg) and group C animals with bupivacaine and pentazocine combination (0.05 mg/kg and 0.15 mg/kg) respectively. Studies revealed a significant decrease in Hb, PCV, TLC in animals of all the groups. Neutrophils increased significantly in animals of group B with significant decrease in lymphocyte. Serum glucose and ALT showed a significant increase in animals of all the groups. BUN and AST increased significantly in animals of group B only. Serum creatinine increased and total protein decreased non significantly in all the groups.

ANS 17: Optimization of Anaesthetic Protocol for Castration in Cow Bull

Rajiv Kant, M.G. Thorat, R.V. Raulkar, S.P. Mehesare, Fani Farheen Anjum and S.D. Chepte
Department of Veterinary Surgery & Radiology, Veterinary College, Akola (Maharastara)

The study was carried out in 12 clinical cases of cow bulls, randomly divided into two groups. Intramuscular injection of ketoprofen (3 mg/ kg) was administered as pre-emptive analgesia 20 minutes prior to actual castration. In group 1.5 ml 2% lignocaine HCl was infiltrated locally along the course of spermatic cord. In group II, caudal epidural analgesia was achieved using a mixture of xylazine (0.1 mg /Kg)-4.0 ml of 2% lignocaine HCl. All the animals were castrated by using Burdizo castrator. Caudal epidural analgesia was found to be superior to local infiltration as pain and inflammation was less.

Ans 18: Comparative Efficacy of Surgical and Chemical Castration in Male Dogs

Pooja Dorle, M.G. Thorat, R.V. Raulkar, S.P. Mehesare, Fani Farheen Anjum and S.D. Chepte
Department of Veterinary Surgery & Radiology, Veterinary College, Nagpur, (Maharastara)

The study was carried out on 12 male dogs with normal libido, randomly divided into two groups. In Group A, conventional method of castration by open pre-scrotal method under dissociative anaesthesia was carried out. The dogs of Group B were subjected to single bilateral intra-testicular injections of 20% calcium chloride dihydrate (CaCl2.2H2O) prepared in 95% ethanol. Dose of intra-testicular injection was decided on the basis of width of each testicle using a metric scale. The chemical castration is cost effective, simple, minimum invasive technique and free from post-surgical complication and also suitable for mass scale application for the control of stray dog population.

ANS 19: Clinico-Physiological Evaluation of Ropivacaine as an Epidural Analgesic in Cow Calves

Sachin Choudhary, B.P. Shukla, A.S. Parihar and Y.P. Singh
Department of Veterinary Surgery and Radiology, College of Veterinary Science & A.H., Mhow (M.P.)

The study was conducted on 6 male cow calves subjected to different treatments and each treatment lasted for

three days in both groups. In treatment-I, ropivacaine hydrochloride (0.11mg/kg) and in treatment II, ropivacaine hydrochloride (0.22 mg/kg) were administered simultaneously in the sacrococcygeal space. The onset of analgesia after administration of ropivacaine in treatment I, was 3.5±0.08 minutes with the duration of 77.5±3.48 minutes, and in treatment II, the onset of analgesia was within 2.61±0.03 minutes with the duration of 110.3±4.35 minutes. There were non-significant changes in respiratory rate, pulse rate and rectal temperature in both groups.

ANS 20: Haemato-Biochemical Evaluation of Ropivacaine as an Epidural Analgesic in Cow Calves

Sachin Choudhary, B.P. Shukla, S.S. Pandey and G. Roonwal
Department of Veterinary Surgery and Radiology, College of Veterinary Science & A.H., Mhow (M.P.)

The study was conducted on 6 male cow calves divided into two groups. In treatment one, ropivacaine hydrochloride (0.75%) @ 0.11mg/kg and in treatment two, ropivacaine hydrochloride (0.75%) @ 0.22 mg/kg were given in sacrococcygeal space. There were non significant changes in haemoglobin, total erythrocyte count, packed cell volume, total leukocyte count. Biochemical changes were non-significant in both the groups except blood glucose, which increased significantly in both the group up to 12 hrs and further decreased significantly between 12 to 24 hrs in group 2.

ANS 21: Influence of Tramadol on Minimum Alveolar Concentration of Isoflurane in Cattle

Amritha,V. Senthil Kumar S., Jayakumar K., Kumaresan A. and Dharmaceelan S.
Department of Veterinary Surgery and Radiology, Veterinary College and Research Institute, Namakkal (T.N.)

The study was conducted in 20 cattle randomly divided into two groups of ten animals each presented for major surgical interventions. In all the animals, acepromazine maleate (0.04 mg/kg, IV) was administered. In group II animals, tramadol hydrochloride was administered (2.0 mg/Kg, IV) following acepromazine maleate administration. Anaesthesia was achieved with double drip solution containing ketamine 2.0 mg and guaifenesin 50.0 mg per ml, respectively, administered IV "to effect". Aanaesthesia was maintained with isoflurane. The fraction of inspired and end tidal isoflurane concentration was significantly lower in group II. The minimum alveolar concentration of isoflurane was found to be reduced by 33.33 per cent in group II. Lower vaporizer setting and fresh gas flow rate were required in group II to maintain surgical plane of anaesthesia and it resulted in a 17 per cent reduction in the utilization of isoflurane. Tramadol was found to cause a significant isoflurane sparing effect.

AVIAN SURGERY

No. of Abstracts	:	**17**
No. of Lead Paper	:	**01**
Lead Paper Speaker	:	**Prof. Indermini Nath**
Chairman	:	**Prof. Dipak De**
Co-Chairman	:	**Dr. Mozamil Hoque**
Rapporteur	:	**Dr. S.M. Behl**

AVS 1: An Unusual Case Report of Osteosarcoma in a Pigeon

S. Kokila, D.Vishnugurubaran, A.R. Ninu, P. Shankar and R. Ram Prabhu
Department of Veterinary Surgery and Radiology,VCRI, Tirunelveli (T.N.)

A 2 year old pigeon was presented to Teaching Veterinary Clinical Complex, Tirunelveli with the history of a swelling near the hindleg for the past 15 days. On clinical examination there was a hard mass of bony consistency at the ventral aspect of pubis bone approximately 1cm in diameter. Fine needle aspiration cytology revealed small cluster of neoplastic cells with vacuolated cytoplasm, eccentrically placed nucleus, large nucleoli and few multinucleated cells were observed .Based on the clinical and cytological examination the case was diagnosed as osteosarcoma which is rarely reported in pigeons.

AVS 2: Avulsion and Fracture of Wing in a Turkey

A.R. Ninu, M. Shiju Simon, S. Kokila, D. Vishnugurubaran, P. Shankar and R. Ram Prabhu
Department of Veterinary Surgery and Radiology,VCRI, Tirunelveli (T.N.)

A 2 year old turkey was brought with avulsion of left wing from the base with exposed one inch of humerus and open fracture of the right humerus following dog bite. The bird was anoretic for 12 hours and with cold extremities. The feathers around the wound were clipped and prepared aseptically for surgery. Under local infiltration, the free bone fragments around the exposed humerus were removed followed by muscle and skin suturing to cover the exposed portion of the bone. The open fracture of right humerus was stabilized with a custom designed splint after reducing the fracture and suturing the skin in an interrupted manner. The bird was given intravenous fluids through medial metatarsal vein along with antibiotics and analgesics.

AVS 3: Clinical Evaluation of Anaesthetic Effects of Ketamine-Xylazine and Ketamine-Diazepam Combination for the Management of Various Surgical Affections in Birds

Madhu D.N., Rohit Kumar, Sivanarayanan, T.B., P. Kinjavdekar, A. M. Pawde, H.P. Aithal and Amarpal.
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The study was conducted to assess the anaesthetic effects of xylazine - ketamine and diazepam - ketamine combination for management of various surgical affections in avian species referred to the division of surgery, IVRI. A total of 15 cases were recorded in different avian species included black kite, parrot, Indian spotted eagle, pigeon, owl, duck, emu, vulture and chicken. The surgical conditions included skin wounds, tumour, electrocution, fight injuries, dog bite injuries, fractures and intestinal evisceration. In all these cases, anaesthesia was induced and maintained with different doses of combination of xylazine - ketamine and diazepam - ketamine. The effects of each combination on heart rate, respiratory rate, cloacal temperature, maintenance and recovery period of anaesthesia were recorded. It was concluded that intramuscular injection of xylazine - ketamine provided safe and longer duration of anaesthesia than the diazepam - ketamine administration with good clinical and physiological parameters and may be recommended as a safe anaesthetic protocol during various surgical procedure in avian species.

AVS 4: Deep Lacerated Wound of Neck in Emu (*Dromaius novaehollandiae*)

Deepak Kumar Kashyap, GovinaDewangan and Devesh Kumar Giri
Department of Veterinary Surgery and Radiology, Arawali Veterinary College, Bajor, Sikar (Rajasthan)

A 2 years old male emu, weighing about 120 kg was referred from the Instructional Livestock Farm Complex (ILFC) to the Department of Veterinary Surgery and Radiology with the history of injury by fencing wire which

surrounds the cage and bleeding from the injured site. Clinical observations included bleeding, flapping of skin and exposure of trachea due to deep penetration. Physiological parameters revealed elevated body temperature and heart rate. Under asepsis, the wound was flushed with normal saline to remove all the debris present inside the inner layers followed by irrigation with metronidazole solution. The antibiotic powder was sprinkled over the wound cavity. Muscle layers were sutured with catgut no. 2-0 in continuous pattern and finally the skin flap was closed, after removal of necrosed part by silk no.1 in mattress pattern. Post operatively, the site was dressed with povidone iodine solution and gentamicin ointment. Parentally, Inj. Gentamicin @ 4 mg/kg and inj. Meloxicam @ 0.2 mg/kg body weight, intramuscularly were given for 5 days. The bird was completely recovered on 8th day without any complications.

AVS 5: Management of Major Metacarpal Bone Fracture in Eagle-A Case Report

J. Khurma, Ravendra Singh, P. Bishnoi and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science
Rajasthan University of Veterinary and Animal Sciences (Bikaner)

An eagle was presented to TVCC, CVAS, RAJUVAS, Bikaner with a history of severe kite string injury in left wing, falling down and not able to fly. Radiograph of left wing revealed fracture of major metacarpal bone. After proper restraining, wounded site was aseptically cleaned by using chlorhexidine solution followed by scrub site with 5% povidine-iodine solution. Splint was formed using PVC tube of narrow diameter by cutting it vertically on one side to its complete length. The splint material is cut to a length equal to the distance from the cranial edge of the metacarpus to the distal phalanx. After applying splint overlapping adhesive tape strips are applied lengthwise to the dorsal and ventral surfaces of the feather shafts to keep the splint in place. Tape edges are pressed together to provide strength. Splint was kept for 15 days. Broad spectrum antibiotic, Enrofloxacin (5 mg/kg b.wt. IM for 5 day) and non-steroids anti-inflammatory drug Meloxicam (0.2 mg/kg b.wt, IM for 3 day) were administered. The eagle showed recovery without any complication.

AVS 6: Management of Splay Leg in Emu Chick

Rajesh Kumar, Ramesh Tiwary, G.D. Singh and Mithlesh Kumar
Bihar Veterinary College, B. A. U. Bhagalpur, Patna (Bihar)

Emu is adaptable to a wide range of environmental conditions. Leg deformities are one of the major causes of mortality in emu chicks. Spraddle leg or splay leg is leg deformities that begin when birds are quite immature. It occurs when abnormal lateral forces on leg & feet cause the long bones & sockets of upper leg to distort & bend outward or sideways. Both legs are usually affected. Main cause of this condition is slicky nesting area, abnormal bedding, mycotoxins, deficiencies of ca& VitD3 & high phosphorus. Total 20 emu chicks with splay leg were recorded during Nov.2014 to March 2015. Among these 20 emu chicks, fourteen had bilateral leg deformities & six had unilateral leg deformities. Both legs of all emu chicks were ties with an adhesive tape at proximal to ankle i.e. tibiotarsus, so that leg can no longer splay outwards. To protect baby legs a wrap is made on leg by bandage & adhesive tape with the help of ice-cream stick on both medial & lateral side. All chicks were also supplemented with vitAD3 &ca 2ML/water for one month. Out of 20 emu chicks, twelve emu chicks were nearly walking normally without leg deformities after 15 to 28 days. Five emu chick died during period of management & three recover with slight leg spay even after 60 days.

AVS 7: Surgical Management of Compound Fracture of Humerus in an Indian Peahen (*Pavo cristatus*)

Madhu D.N., Sivanarayanan, T.B., Rohit Kumar, P. Kinjavdekar, H.P. Aithal, A.M. Pawde and Amarpal
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

An Indian peahen (Pavocristatus) was referred to division of surgery, IVRI, with a history of compound fracture of right humerus and inability to fly. Physical examination revealed the presence of large contaminated wound on the medial aspect of right wing along with the presence of fractured fragment of right humerus. Radiographic examination revealed presence of transverse fracture at the distal third of right humerus. Wound debridement, open reduction, intramedullary pin fixation and wound closure were performed under general anaesthesia followed by external co-optation of the operated wing. Post-operatively antibiotics and analgesics were administered. Radiographic healing was noticed at 5th week post surgery and pin removal was performed and the bird recovered uneventfully.

AVS 8: Surgical Management of Egg Bound Syndrome in Pet Birds-A Review of 6 Cases

R. Sivashankar, Ravi Sundar George, S.Dineshkumar, Mohammed Shafiuzma, M. Gokulakrishnan and Mala Shammi
Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai (T.N.)

A total of 6 Parakeets with Egg bound syndrome were studied. The history reported by the owner was abdominal straining and enlargement, inability to lay eggs and loss of appetite. In three cases abdominal massaging was done which was not successful. Surgical intervention was planned for all the birds. All the birds were induced with Isoflurane in Oxygen by mask induction. Mid-ventral caudal abdominal incision was made to exteriorize the reproductive tract. The uterus was incised and the eggs were removed. The uterus incision was closed with 4-0 PGA by inversion pattern and the abdominal muscle was closed with 4-0 PGA by continuous pattern. Skin closed routinely. Post operatively, oral antibiotics, analgesics were given for 5 days and routine wound management was done. One bird died due to septicaemia due to peritonitis and all the other birds recovered uneventfully without any complications.

AVS 9: Surgical Management of Impacted Crop in A Peacock

G.Vani, M.Seenu and N.Dhana Lakshmi
Veterinary Poly Clinic, Chittoor (A.P.)

A peacock weighing 5kgs was presented in recumbent position by the forest range officer at the Veterinary poly clinic, Chittoor in July' 2012 with a complaint of pendulous crop, dull, depressed and open beak condition. Clinical examination revealed that crop was distended at the base of neck. Radiograph suggested ingluviotomy. Under local infiltration with 2% Lignocaine, a linear incision was made on the crop and the impacted mass of tapioca was evacuated. The crop was cleaned with normal saline and was closed by lock stitch with catgut No.1/0. Suturing of the muscles, S/C tissue and skin was done in routine manner. Postoperatively, Tab. of Cephalexin, Tramadol, Sy. Vimerol along with antiseptic dressing with Betadine solution was done for five days. Soft food was given for three days and the bird showed good recovery in a period of one week.

AVS 10: Surgical Retrieval of Baby Feeding Tube in an African Grey Parrot (*Psitta cuserithacus*)

D.R. Mer, P.V. Parikh, S. Senthilkumar, E.A. Parulekar, J.M. Khatri, N.R. Amin, K.S. Gameti and T.A. Mehta
Department of Veterinary Surgery and Radiology, Veterinary College, AAU, Anand (Gujarat)

An African grey parrot of 3 months of age was presented to the Department of Veterinary Surgery and

Radiology, AAU, Anand, with the history of accidental ingestion of feeding tube. Bird was healthy, alert and active at the time of presentation. One end of feeding tube was palpated in crop. Radiographic examination revealed radiolucent tubular structure in a crop. It was decided to perform emergency ingluviotomy under inhalant anaesthesia using chamber induction with isoflurane. Preparation of the site was carried out by plucking surrounding feathers and surgical scrubbing. One stab incision was made on palpated end in crop. Feeding tube of around 9 cm length was retrieved from crop. Suturing of crop was done by Vicryl 3-0 absorbable surgical suture in two –layers suturing technique. Skin was sutured by using Cotton thread. Lixen® powder was given orally for 5 post-operative days. Bird was recovered uneventfully after 10 days.

AVS 11: Management of Metatarsal Fracture in Cock- A Case Report

J. Khurma, Ravendra Singh, G. Koli and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science
Rajasthan University of Veterinary and Animal Sciences, Bikaner (Rajasthan)

A cock of 1 year age was presented to TVCC, CVAS, RAJUVAS, Bikaner with a history of trauma and excessive pain in left limb while walking. Radiograph of left hind limb revealed fracture of metatarsal bone. Supportive bandaging was done using PVC sheath for 15 days. Broad spectrum antibiotic, Enrofloxacin (5 mg/kg b.wt. IM for 5 day) and non-steroids anti-inflammatory drugs Meloxicam (0.2 mg/kg b.wt, IM for 3 day) were administered. The cock showed recovery without any complication.

AVS 12: Comparative Evaluation of Standard Caponisation with Laparoscopic Assisted Caponisation in 30 Day Old Broilers for Better Meat Quality Production

Manjunath Patil, D. Dilipkumar, B.V. Shivaprakash, B. Bhagavantappa, M.H. Girish, Pradeep Kumar and Vasudev Pai
Department of Veterinary Surgery and Radiology, Veterinary College, KVAFSU, Bidar (Karnataka)

Thirty day old eighteen broiler birds were randomly divided into three groups with six birds in each group. The body weight of the birds ranged from 1 to 1.5 kg. All the birds were maintained under standard deep litter feeding system up to the age of 45 days. Group I (6) birds were used as control birds. Group II (6) birds were subjected to standard caponisaion procedure on 30th day and were maintained up to 45 days. Group III (6) birds were subjected to laparoscopic assisted caponisation on 30th day and were maintained up to 45 days. The caponisation procedure of Group II and III was done under 0.7 ml of 2% lignocaine infiltration. The parameters viz., visualization of testis, ease of removal of testis and complications of the procedure were recorded. On 45th day, all the birds of three groups were slaughtered. The meat of the slaughtered birds was subjected to organoleptic tests (colour, odour, taste, and tenderness), pH, dressing percentage, water holding capacity, extract release volume and collagen staining were studied for knowing the impact of caponisation on meat quality and those datas were statistically analysed and comparison of caponised and non- caponised birds was done.

AVS 13: Comparative Evaluation of Xylazine- Ketamine and Dexmedetomidine Ketamine Combination in 30 days old Broilers

Manjunath Patil, D. Dilipkumar, B.V. Shivaprakash, S.M. Usturge, D. Jahangir and B. Bhagavantappa
Department of Veterinary Surgery and Radiology, Veterinary College, KVAFSU, Bidar (Karnataka)

A study was conducted in 12 broiler birds which were randomly divided into two groups with six birds in each group. 30 day old broilers were selected for the study. The body weight of the birds ranged from 1 to 1.5 kg. Birds of both groups were off

fed for 6 hours. Group I (6) birds were given Xylazine @ 3 mg/kg intramuscularly and 5 minutes later Ketamine was given @ 20 mg/kg intramuscularly. Group II (6) birds were given Dexmedetomidine @ 5µg/kg intramuscularly and Ketamine was administered similar to group I. The physiological parameters viz., heart rate, respiratory rate and rectal temperature were recorded at 0 minute, 5 minutes, 15 minutes, 30 minutes, 45 minutes, 60 minutes, 75 minutes and 90 minutes. Recumbency, closure of eyes, beak touching the ground, onset of anaesthesia, duration of anaesthesia and recovery periods were recorded and compared. The complications of anaesthesia were also recorded.

AVS 14: Evaluation of Xylazine-Ketamine Combination for Anaesthetizing Parrots

Chandru S., N. Aruljothi and T.P. Balagopalan
Department of Veterinary Surgery and Radiology, Rajiv Gandhi institute of Veterinary Education and Research, Puducherry (Pondicherry)

A Clinical study was conducted to evaluate the efficacy of Xylazine-ketamine combination for anaesthetizing 3 Parakeets and 4 Parrots presented at TVCC with various surgical affections viz fracture, dislocation and wounds. Body weights of the birds were between 60 & 100 grams. Blood sample was collected for Hb and PVC estimation. Food and water were withheld for 2 hours and were sedated using the xylazine–ketamine combination @ 2.5 mg and 10 mg per kg body weight, respectively administered intramuscularly. Physiological parameters viz; Heart rate, Respiration rate, cloacal temperature, Colour of Mucus membrane, Quality of pulse, CRT were recorded before and during sedation for every 15mts. Luke warm water bags were used for thermoregulation. Blinking of eyelids, tenting of tail and swallowing reflexes were monitored during the recovery period. Mean induction time, recovery time and period of sedation were 5, 45 and 45 min. respectively. All the birds recovered uneventfully.

AVS 15: Human Hair Lump Induced Multiple Ulcers in Oropharynx in a Sheen-Pippin (A migratory bird) and its Correction

D. M. Makhdoomi, Mohsin Ali Gazi, Saim Qureshi, Showkatul Nabi, Md. Moin Ansari and Rafiq Ahmad Shah
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry Shuhama, Srinagar (J.&K.)

A case of multiple incisions/ulcers created by a lump of human hair in a sheenpipen was reported for the first time in Kashmir and its treatment and free release is documented. The bird was rescued by a bird lover and presented for treatment. The bird was entangled in a lump of hairs and in an attempt to free it, the bird tried open the human hair lump with its beak. The hairs incised the oropharynx of the bird and resulted in bleeding and anorexia. The hair lump was removed; cud from proventriculus of a pigeon was transplanted into the pharynx of the ailing bird. The ulcers were washed with glycerine thrice a day. The bird was kept admitted in an oven to provide warmth. On day 4th, the sheenpipen took mash of its own and released.

AVS 16: Surgical Management of Traumatic Evisceration Caused by Dog Bite in a Turkey Hen (*Meleagris gallopavo*)

S. Dharmaceelan, S. Senthil kumar, K. Jaya kumar and A. Kumaresan
Department of Veterinary Surgery and Radiology,Veterinary College and Research Institute Tamilnadu Veterinary and Animal Sciences University, Namakkal (T.N.)

A two year old broad breasted bronze hen was presented with the history of dog bite wound with protrusion of intestinal loop through the wound. The intestinal loops were dry and contaminated. The bird was dull and depressed. An indwelling intravenous catheter was fixed and intravenous fluid (5% DNS) and amoxicillin was administered at the dose rate of 20 ml and 20 mg per kg body weight, respectively. Surgical intervention was advocated and the

anaesthesia was induced with diazepam-ketamine and maintained with isoflurane. The protruding intestinal loop was repositioned aseptically into the abdominal cavity and the wound was closed in two layers. The temperature was monitored throughout the period of anaesthesia and during postoperative period until recovery and maintained with heating pad to prevent hypothermia. Routine postoperative wound care and antibiotic therapy with amoxicillin for 7 days resulted in an uneventful recovery.

AVS 17: Avian Ocular Affections and Management: A Report of 12 Cases

C. Ramani, **Rambabu Kalaka,** Md. Shafiuzama, L. Nagarajan and T. N. Ganesh
Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai (T.N.)

Birds were presented to Small Animal Ophthalmology Unit, Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai with a history of ocular affections were chemosis, traumatic eye, glaucoma, purulent conjunctivitis, dropping of comb, ankyloblepharon, maggot wound, lacerated wound, periorbital abscess, iriditis, panophthalmitis and cataract. The details of the avian ocular affections of the above conditions, medical management and surgical procedure will be discussed.

EQUINE SURGERY

No. of Abstracts	:	**20**
No. of Lead Paper	:	**01**
Lead Paper Speaker	:	**Dr. R.V. Suryawanshi**
Chairman	:	**Dr. Sukhbir Singh**
Co- Chairman	:	**Dr. (Capt.) G.D. Rao**
Rapporteur	:	**Prof. Ramalingam Ganesh**

EQUINE 1: Extirpation of Eyeball in a Mare following Faulty Surgical Removal of Eye Worm

Aarif M. Khan, Suhani Bashir, Dumrailia, D.M. and Santosh Arun
ATMA/NAMET, Srinagar (J.&K.)

A thoroughbred mare aged 5years (weight 344.5kg) was presented to Veterinary Hospital Silvassa, Dadra and Nagar Haveli with the history of excessive lacrimation and blepharitis. The mare had undergone surgery for removal of eye-worm (Thelezia spp.) in her right eye a week ago. Close clinical examination of the affected eye showed ruptured cornea and prolapse of the associated structures with extensive edema of the conjunctiva and periorbital fat. Extirpation of the right eye was performed as per the standard procedure under general anaesthesia and the mare recovered uneventfully.

EQUINE 2: Funduscopy of Erratic Migration of Setarial Worm and Trypanosomiasis Induced Chorioretinitis in Horses: A Report of Two Cases

Sini, K.R., D.N. Kelawala, D.B. Patil, P.V. Parikh, J.M. Khatri and E.A. Parulekar
Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry
Kamdhenu University, Gandhinagar, Anand Agricultural University, Anand (Gujarat)

Chorioretinitis is the most common abnormality identified on examination of the equine fundus. Funduscopy of a horse presented with history of eye worm in anterior chamber revealed vermiform chorioretinitic lesions which were hyper reflective in tapetum and depigmented in non tapetum. These vermiform lesions might be due to movement of setarial worm during its erratic migration from peritoneum to posterior segment of eye. On fundus examination, one horse with a previous history of trypanosomiasis revealed multifocal, depigmented lesions which appeared white with a pigmented centre, most commonly ventral to the optic disc in the non tapetal fundus. They were small and bullet-hole shaped. This bullet-hole chorioretinitis might be a sequel of trypanosomiasis.

EQUINE 3: Surgical Management of Lacerated Wound on Forehead in a Mare-A Case Report

G. Koli, J. Khurma, Ravendrasingh and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Sciences
Rajasthan University of Veterinary and Animal Sciences, Bikaner (Rajasthan)

An 8 year old mare was presented with a history of trauma and laceration at forehead region due to road accident. Clinical examination revealed a long lacerated wound with a six-inch flap of skin hanging off its forehead. The surgical site was prepared aseptically and lacerated skin flap was sutured using silk by interrupted suture pattern under Xylazine sedation (10 ml IV). Tetanus Toxoid (5 ml IM) was administered immediately after surgical correction. Antibiotic for 7 days, analgesic for 3 days, multivitamin for 3 days were administered. Sutures were removed 10th day post-operatively and wound healed completely.

EQUINE 4: Surgical Correction of Pedunculated Sarcoid in a Mare-A Case Report

J. Khurma, Ravendrasingh, M. Tanwar and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science,
Rajasthan University of Veterinary and Animal Sciences, Bikaner (Rajasthan)

A 5 year old mare was presented with a history of finger like mass at left medial thigh region. Histopathology examination confirmed it as sarcoid. Under general anaesthesia a clamp was applied at the base and the mass was

excised after proper ligation. The wound was closed in routine manner. Postoperatively, antibiotics, NSAIDS for 3 days and Tetanus Toxoid 5 ml IM were administered. Sutures were removed on 12th day post-operatively. The mare recovered uneventfully.

EQUINE 5: Surgical Management of Elbow Hygroma in a Horse

V. Mahesh and L. Ranganath
Department of Surgery and Radiology, Veterinary College, KVAFSU, Bengaluru (Karnataka)

A five year old mare was presented with a history of painless swelling at right elbow joint since six months. It was treated by a local Veterinarian. On examination, the swelling was hard, non fluctuating and pain less on palpation. It was decided for surgical enucleation of bursa. Under general anaesthesia with aseptic precaution, the fibrosed bursa was excised. Postoperatively animal recovered without any complication.

EQUINE 6: Use of Conservative Surgical Treatment (Elastrator Ring) for Repair of Umbilical Hernias in Foals-Review of 10 Cases

R.V. Suryawanshi, Vijay Vaidhya and Ravi Reddy
Nanoli Stud & Agricultural Farms, Nane, Dist-Pune (Maharashtra)

In present study, foals aged between 60 to 120 days of either sex were included from the period of 2011 to 2014. Out of 200 foals, 10 foals (20%) showed ventral abdominal swelling around the umbilical stump with palpable and reducible hernial mass. All ten foals restrained in standing position after sedation (Xylazine @1.1mg/kg body weight) and subjected for application of elastrator ring (Elastrator, Heiniger International Switzerland). Out of ten foals, two (20%) showed omphalitis including purulence or foul smelling discharge from umbilical stump, peri umbilical erythema, maggot infestation, edema and tenderness and were treated accordingly. Remaining eight foals (80%) showed complete recovery from herniation in 45 to 60 days.

EQUINE 7: Surgical Treatment of Pneumovaginitis in Mares by Caslick Operation (Vulvoplasty)-Review of 28 Cases

R.V. Suryawanshi, Vijay Vaidhya and Ravi Reddy
Nanoli Stud & Agricultural Farms, Nane, Dist-Pune (Maharashtra)

Pneumovagina is commonly seen in horses especially mares in due to faulty closure of vulvar lips, constant fecal contamination of the vestibules and vagina and traumatic injuries to vagina due to abnormal handling of fetus during foaling that cause mare to aspire air into her tubular reproductive tract termed as “windsucker”. Out of 98 mares, 28 (27.44%) mares were chronic windsucker. After proper preparation of perineum and vulva in all cases, under local anaesthesia Caslick surgery was performed and the sutures were removed on 10th day postoperatively. Out of 28 mares, 21 (75%) mares showed normal wound healing pattern, normal behaviour and progressive improvement in conception rate in the consecutive breeding season.

EQUINE 8 Successful Removal of Ocular Filariasis in a Horse

Beenish Qureshi, Khadim Hussain Dar, Hakim Athar and Majidali Tak
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry SKUAST-K (J.&K.)

An intact male horse of 4 years of age weighing 230 Kgs was presented with the history of corneal opacity, lacrimation and photophobia of left eye since 5 days.. On ocular examination, eye worm was detected by its vigorous movements inside the aqueous humor of eye. The eye worm was removed surgically under general anaesthesia after incising at the limbus of eye. Postoperatively animal was prescribed ointment ocupol for topical application. The animal recovered successfully.

EQUINE 9: Knock Knee (Carpal Valgus) vs Contracted Tendon in Foals

B. Bharti, Brajesh Mishra, Satyaveer Singh and Sorabhamarwal
1VAS, Veterinary Hospital Majhgawan, Satna (M.P.)

Three foals (two horses and one mule) were presented with the history of carpus valgus in one foal and congenital contracture of knee joints in two foals. Affected foals between 4 and 12 days of age. Foal with knock knee was treated by application of crape bandage at regular interval over both the knee joints (more compression was given at palmar site of knee joints) and exercise was restricted (stall rest). Slight rasping of hooves, outside half of the hoof was carried out at weekly interval. Foals with contracted tendon were treated with injection oxytetracycline @ 40 mg/kg bwt in dilution with normal saline, I/V, 3 consecutive days, regular exercise and physical therapy with omnigel two times/day. Bamboo splints were applied on lateral side of the limb. Foals showed uneventful recovery.

EQUINE 10: Management of Rectal Prolapse in a Working Mare- A Case Report

V. Varshneya, D.S. Mohite and V.K. Harsola
Veterinary Trainer, Brooke Hospital for Animals (India)
2nd Floor, A-Block, 223-226, Pacific Business Park, Sahibabad Industrial Area, Ghaziabad (U.P.)

A six years old working mare with a large cylindrical prolapse involving ampulla recti tissue presented at a Brooke mobile clinic. The prolapsed mass was gently washed and necrotic tissues were removed under sedation (xylazineHCl 0.5 mg/kg, butorphanol tartrate 0.02 mg/kg, i/v) and caudal epidural (5 ml 2% lignocaine). 2% lignocaine gel was applied topically, the everted mass was repositioned and purse-string sutures were applied. Treatment included hyoscine butyl bromide @0.5mg/kg IV, tetanus toxoid 2.5 ml IM, 5 litre Ringers lactate IV and 1 litre liquid paraffin through nasogastric tubing. Phenylbutazone @2.2 mg/kg PO BID and laxative diet was advised until sutures were removed on 3rd day.

EQUINE 11: Rupture of Prepubic Tendon and Ventral Abdominal Wall in a Mare

D.M. Makhdoomi, Mohsin A. Gazi, Showkatulnabi, Mdmoin Ansari, Jd Parrah, Mohmadmuzahir and Rafiq Ahmad Shah
Division of Veterinary Surgery and Radiology, FVSAH, SKUAST-K (J.&K.)

A six year old mare with a history of anorexia, depression, and gradual swelling at ventral abdominal since last two months was presented to the Teaching Hospital. Before a physical examination could be undertaken, the recumbent mare developed a spontaneous tear at the ventral midline cranial to the udder which increased longitudinally. The apparently healthy gravid uterus with a live fetus inside came out along with other intestinal organs. The uterus (gravid and non-gravid horns) had torn off with the cervix and at the ovarian end, with ovaries remaining inside the abdomen of mare. A live foetus was pulled out of uterus and was resuscitated successfully. The mare died within few minutes. Post-mortem examination revealed an irregular tear of skin and underlying musculature, about 24 inches in length, extending from near the umbilicus to the perineal region in between the two teats. There was a bilateral rupture of the pre-pubic tendon.

EQUINE 12: Surgical Excision of Sarcoid in a Working Mule in a Hilly Terrain

S. Thakur[1], D.S. Mohite[2] and V.K. Harsola[3]
1Veterinary Officer, ERA, Brooke Partner Equine Welfare Project, Kangra (H.P.)
2Team Leader Research, 3 Veterinary Trainer, Brooke Hospital For Animals (India),
2nd floor, A – Block, 223-226, Pacific Business Park, Site –IV, Sahibabad Industrial Area, Ghaziabad (U.P.)

Sarcoid is the most common locally invasive equine skin tumour. Welfare may be compromised due to

discomfort and loss of function. A six year old female mule working in hilly region presented with a tennis ball-size multiple ulcerated growths (histopathologically confirmed as fibroblastic sarcoid) at the left ear base. Due to limited resources, the sarcoid was excised under sedation and local anaesthesia with a 3 cm margin. Following tetanus anti-toxin 2.5ml IM, five days phenylbutazone@ 2.2mg/kg PO BID and procaine penicillin @20000 IU/kg IM SID recovery was unremarkable. Seven months post excision, no regrowth was noted.

EQUINE 13: Surgical Management of Traumatic Fistulous Withers in Working Ponies of Kashmir

Khadim Hussain Dar, Hakim Athar and Mehraj-u-din Dar
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry SKUAST-K (J.&K.)

The study was conducted on seven adult ponies of both sexes (two females and five castrated males) aged 7.0±0.80 years and weighing 229.5±37.5 kg. The wounds on the withers region were diagnosed as fistulous withers based on history, physical examination findings, microbiological culture results, and radiographic findings. Treatment regimen were divided into two categories: 1) conservative topical therapy plus padding or 2) surgical debridement and primary wound closure respectively. In five ponies the conservative therapy with topical medications and padding taking care to keep the wound dry and free from contamination was used. However, as the animals were continuously used for the routine work after conservative therapy, recurrence of lesions was high. While in other two ponies which had extensive lesions primarily surgical treatment was done. As a result of surgical intervention, owners were advised not to use the ponies for routine work for a period of three weeks.

EQUINE 14: Thrush and its Management in a Kathiawari Horse

Harish Kulkarni, Shivanand Magadum, Bhoyar, R. and Vivek Kasaralikar
Department of Veterinary Surgery, Veterinary College, Bidar (Karnataka)

A 5 year old, male, Kathiawari horse presented to the Teaching Veterinary Clinical Complex (City Hospital), APMC yard, Gandhi Gunj, Bidar with a history of limping on its hind legs since fifteen days. The examination of right hind foot revealed serosanguinous discharge from the frog region with degenerative changes. Bloody discharge noticed with degeneration of frog region noticed in left hind foot and the case was diagnosed as thrush. Both the hooves were cleaned with potassium permanganate solution and kept in a dry place. After 20 minutes, mixture of zinc sulphate and copper sulphate powder was kept on both the hooves and were bandaged. The owner was advised to keep the horse in a dry place. Tetanus toxoid was administered along with routine broad spectrum antibiotics and analgesics. Animal showed complete recovery after 7th day without any complication.

EQUINE 15: Surgical Management of Guttural Pouch Empyema in Horse- A Case Report

Satyaveer Singh, J. Khurma, Ravendra Singh and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science Rajasthan University of Veterinary and Animal Sciences, Bikaner (Rajasthan)

An 8 year old horse was presented with a history of persistent left side unilateral nasal discharge, difficulty in swallowing and palpable, fluctuating visible swelling behind the jaw. Exploratory puncture of swelling revealed purulent material discharge. It was diagnosed as guttural pouch empyema. The pouch was drained by using a catheter. Guttural pouch was lavaged with normal saline solution and dilute antiseptic to resolve the infection for 2 weeks. Broad-spectrum antibiotic for 7 days, analgesic for 3 days, multivitamin for 3 days were administered. The horse recovered after two weeks.

EQUINE 16: Successful Removal of Small Intestinal Metallic Foreign Bodies in Two Year Old Colt-A Case Report

R.V. Suryawanshi, Phiroz Khambatta, Vijay Vaidhya and Ravi Reddy
Nanoli Stud & Agricultural Farms, Nane, Dist-Pune (Maharashtra)

A two year old colt was presented to farm hospital with history of inappetance, progressive loss of body weight and intermittent episodes of colic during the last six months. Colt showed severe colic attack consecutively in one week and was treated. After thorough clinico-haematological evaluation, it was decided to operate. Horse was anesthetized with triple drip method includes Xylazine (@1.1mg/kg) and Ketamine (2.2mg/kg) and surgical anaesthesia maintained on 5% Guaifenesin (50mg/ml given at 1ml/1b/hr). After complete exploration of abdomen, the hard structure encircled with small intestinal loops connected with fibrous tissue and further exploration revealed presence of metallic wire in jejunum accompanied with mucosal thickening and severe adhesion between surrounding loops of intestine. The foreign metallic wire measuring 6-7cm long embedded in whole thickness of intestinal wall was removed. Postoperatively antibiotic, painkillers, fluids for one week and eventually shifted on soft feed with green grass. The colt passed normal faeces on 15th day postoperatively and returned to normal appetite gradually.

EQUINE 17: Autologous Platelet Rich Plasma for Regeneration of Tendon Injuries in Horses

Tina Roshini, S., A. Arun Prasad, B. Justin William, T.N. Ganesh, Ravi Sundar George, R. Sivashankar and M. Bharathidasan
Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai (T.N.)

The study was performed to improve the quality of tendon healing through intralesional infusion of autologous bioactive agents with ECM scaffolds. The study was conducted in twelve limbs of eleven horses, in which Autologous PRP in six limbs (Group I) and Autologous PRP with fish scale type I collagen scaffold in six limbs (Group II) were engrafted intra-lesionally into the affected digital flexor tendon by performing ultrasound guided intra-lesional injection. The efficacy of autologous PRP and ECM scaffold in regeneration of tendon was assessed using lameness, flexion test score, ultrasonographic evaluation and biochemical evaluation on 1st, 4th and 8th week post engraftment. Significant decrease in lameness and flexion test score as evaluated by AAEP were noticed from pre-injection day to 8 weeks post operatively in both the groups. In group II, ultrasonographically homogeneity of the tendon fibers with more uniformity in healing was noticed. Regenerative therapy for the tendon injury with PRP and PRP with type I collagen was found to be a useful in healing of tendon.

EQUINE 18: Bog Spavin and its Management in a Local Horse of Kashmir-A Case Report

Khadim Hussain Dar, Shahid Hussain Dar, and Beenish Qureshi
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry SKUAST-K (J.&K.)

A 4 year old intact male horse weighing 230±2.5 kg with swelling of tibiotarsal joint of hock and limping of left hind limb since 14 days was presented for the treatment. Based on the clinical signs, symptoms and response to a flexion test the horse was diagnosed as having bog spavin. The joint was aseptically prepared and around 14 ml of serous fluid was drained. The animal was than administered mixture of isoflupredone acetate and gentamicin 2ml each combined in the same syringe intra-articularly and same was repeated after one week. Pressure bandage was applied around the affected hock joint for 21 days. The owner was advised to not use the animal for heavy work for three week. The horse recovered successfully.

EQUINE 19: Clinical Studies on Ophthalmic Affections in Equines

J.M. Khatri, P.V. Parikh, D.B. Patil, Sini K.R., D.R. Mer and K.S. Gameti
Anand Agricultural University, Anand (Gujarat)

A Clinical study on various equine ocular affections was carried out at the Department of Veterinary Surgery and Radiology from March-2013 to March-2015. Out of 196 horses were referred with different clinical conditions, 56 horses were reported to have ocular affections with overall incidence of 28.57%. Breed wise incidence of ophthalmic affections was maximum in Marwari (30%) crossbred (27%), Kathiawari (25%) and Sindhi (18%). More males (73%) were affected than females (27%). Out of 56 horses with ophthalmic affections, the incidence of ocular setariasis (61.11%, n-33) was highest followed by affections of eye lid (11.11%, n-6), cornea (07.40%, n-4), uvea (07.40%, n-4), conjunctiva (05.55%, n-3), anterior chamber (05.55%, n-3) and globe (3.70%, n-2). Paracentesis of AC for removal of intraocular parasite through a modified clear corneal stab incision at the limbal margins using 2.8 mm pointed tip 450 angled keratome was found technically more relevant than stab incision with B.P. blade No. 11.

EQUINE 20: Enhancement of Wound Healing by Recombinant Human Epidermal Growth Factor (RHEGF) Ointment in Animals

Rambabu Kalaka, C. Ramani, L. Nagarajan, S. Usha Kumary, S. Ramesh and B. Justin William
Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai (T.N.)

The present study was conducted in clinical cases presented to outpatient units of Madras Veterinary College Teaching Hospital on 18 animals. The animals were divided into 2 groups, group I and II each group consisting of 3 dogs, 3 horses and 3 cats. The animals were pre medicated using atropine sulphate and xylazine hydrochloride in required cases and the wounds were cleaned with 70% ethanol and betadine. Partial thickness and full thickness wounds are marked using a template. In group I animals (control group, n=9) the wounds were cleaned with sterile normal saline and treated with povidone iodine ointment dressings with standard systemic antibiotic therapy. In group II animals (test group, n=9) the wounds were cleaned with sterile normal saline and rhEGF (REGEN-D 150) gel was applied with standard systemic antibiotic therapy. The topical application of rhEGF (REGEN-150) gel induced enhanced wound healing as compared to povidone ointment.

RADIOLOGY AND IMAGING

No. of Abstracts	**:**	**12**
No. of Lead Paper	**:**	**01**
Lead Paper Speaker	**:**	**Dr. Adarsh Kumar**
Chairman	**:**	**Dr. T.N. Ganesh**
Co-Chairman	**:**	**Prof. Prem Singh**
Rapporteur	**:**	**Dr. L. Ranganath**

RI 1: Advanced Imaging Studies on Normal Stifle Joint of Camel (*Camelus dromedarius*)

Amit Sangwan and Tarun Kumar Gahlot
Department of Veterinary Surgery and Radiology
College of Veterinary and Animal Science, RAJUVAS, Bikaner (Rajasthan)

Computed radiography and computed tomographic scanning study of normal stifle joint of camel obtained from cadaver was studied and compared. The radiography revealed only the bony structures involved in the joint whereas CT scan revealed both bony and soft tissues.The CT scan studies were done on 3-D, transverse and sagittal sections. Medial patellar ligament was not evidenced. However, the medial femoropatellar ligament was distinguishable. Other important anatomical structures evidenced were cranial and caudal cruciate ligament, medial collateral ligament, lateral patellar retinaculum, middle patellar ligament, attachments of lateral and medial menisci and most of the associated muscles around stifle joint. CT scan also revealed the bony structures of the joint i.e. femoral trochlea, femoral condyles, tibial condyles, intercondylar tubercles, patella, tibial tuberosity etc. This study may contribute significantly to the future research and diagnosis.

RI 2: Clinical Studies on Ocular Funduscopy in Animals

Sini, K.R., D.N. Kelawala, D.B. Patil, P.V. Parikh, E.A. Parulekar and J.J. Parmar
Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry Anand Agricultural University, Anand (Gujarat)

Ocular funduscopy was performed in a total of 205 animals of different species, breed, sex and age. Before funduscopy, the pupils were dilated with a short-acting mydriatic 0.5–1% tropicamide, 30 minutes prior to examination. But in birds, mydriasis was achieved by repeated application of 1% atropine. The normal fundus of the domestic species was composed of neurosensory retina, retinal pigment epithelium (RPE), choroid, sclera, optic nerve head, and, tapetum. Of all the species examined, tapetum lucidum was found to be absent in non-human primates (Langurs) and birds. The canine ocular fundus showed enormous variations in normal ophthalmoscopic appearance compared to other species. Among different animals examined, few species-wise variations observed, include Stars of Winslow in horse, cattle, goat and sheep; absence of tapetum and presence of macula in non-human primates and birds; distinct Bergmeisters papilla in the optic disc of cattle, sheep, goat and camel and presence of pecten in birds.

RI 3: Doppler Studies of Major Abdominal Blood Vessels in Dogs with Renal Dysfunction

Khalid Omer, Pallavi Verma, N.S. Saini, J. Mohindroo and T. Singh
Department of Veterinary Surgery and Radiology, College of Veterinary Sciences
Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana (Punjab)

The current study was conducted on 35 dogs of either sex presented to the Veterinary Hospital, GADVASU, Ludhiana, for renal dysfunction. The dogs were categorized into different stages of renal disease as per the specifications of International Renal Interest Society (IRIS). All the dogs were subjected to complete physical examination, Complete Blood Count, biochemical profile, urinanalysis, grey scale real time B-mode and detailed Doppler ultrasonography of the renal vessels, abdominal aorta and caudal vena cava. The Doppler Indices, viz, Resistive Index (RI) and Pulsatility Index (PI), of the renal vessels showed marked variation from the normal values, however, there was no significant variation in the Doppler waveform, RI and PI of abdominal aorta and caudal vena cava, in dogs with renal dysfunction. Hence, it was concluded that renal dysfunction does not cause any variations in the Doppler waveform and Doppler indices of abdominal aorta and caudal vena cava.

RI 4: Imaging Diagnosis and Surgical Management of Prostate Enlargement in a Dog

K. Kachwaha, Sakar Palecha, Mahendra Tanwar, A. Sangwan, G. Choudhary and T. K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science
Rajasthan University of Veterinary and Animal Sciences, Bikaner (Rajasthan)

A 4 year old Saluki breed male dog was brought to the TVCC, RAJUVAS with a history of stranguria, hematuria, painful defecation, stiff hind limbs and weakness since last 3 days. The lateral digital double contrast cystogram revealed the distended urinary bladder with thin and regular mucosal outline. There was no filling defects or leakage in the abdominal cavity. An enlarged prostate gland was visualized caudal to the urinary bladder. The midline sagittal sonogram of the mid abdomen of the dog revealed an enlarged prostate gland visualized as hypoechoic mass. A prostatic cyst was also lying within the gland substance visualized as anechoic area. The case of prostate enlargement was surgically treated by castration. The operated animal recovered without any postoperative complications.

RI 5: Radio-Diagnosis of Fecolith and its Non-Surgical Management in Dogs

Aarif M. Khan, Suhani Bashir, Dumrailia, D.M. and Santosh, Arun
Maharastra Animal Husbandry Department (Maharasta)

Two dogs (Doberman female and Labrador male) were presented to the Veterinary Hospital Silvassa, Dadra and Nagar Haveli with the history of cessation of faeces for two weeks, depression, lethargy and anorexia. On physical examination, abdominal distension along with intense pain was observed. Radiological examination revealed radiopaque material in the large intestinal tract (Doberman- colon and rectum, Labrador- colon). The cases were diagnosed as fecolith. Both cases were treated by aggressive fluid therapy, oral Docuaste sodium, Augmentin @1.2g, Meloxicam @ 0.5mg/kg of body weight. The cases were assessed clinically and by radiological examination of the abdomen on daily basis during treatment. Milk of Magnesia 2-4ml/lbs was given orally followed by rectal enemas of liquid paraffin. On the 11th day of treatment, there was evacuation of semi hard stool owing to the disintegration of fecoliths. Both the cases showed uneventful recovery after 15th day of treatment.

RI 6: Reliability of Ultrasonography for Diagnosis of Urethral Calculi in Buffalo Bulls

Tarunbir Singh, Pallavi Verma, J. Mohindroo, Navdeep Singh, Rahul Udehiya and S.S. Singh
Department of Veterinary Surgery and Radiology, GADVASU, Ludhiana (Punjab)

Study was performed to evaluate the use of B mode ultrasonography for diagnosis of site of urethral obstruction in male buffalo bulls presented with complaint of anuria or dysuria. Ten animals were included in the study. Pre and post scrotal urethra were scanned. Ultrasonography was able to detect pre-scrotal obstruction in 6 animals. Hyperechoic density within urethra, with anechoic acoustic shadow and dilatation of urethra, proximal to the site of obstruction indicated urethral obstruction by calculi. In other 4 animals, no calculus was detected ultrasonographically. In these animals, post-scrotal urethrotomy was performed and calculi were retrieved. Superficial placement and a relatively fixed anatomical location of pre-scrotal urethra were found helpful in localizing the pre-scrotal urethral calculi.

RI 7: Ultrasonographic and Radiological Findings of Various Abdominal Disorders in Dogs

M. Durga Prasad, **V. Devi Prasad,** N.V.V. Hari Krishna, G. Venkata Naidu and V. Vykuntarao
NTR College of Veterinary Science, Gannavaram (A.P.)

In the present study, various disorders of abdominal organs have been diagnosed using either radiography or ultrasound or both. The disorders of various abdominal organs are as following: hepatomegaly, ascites, tumour, Cholecystitis, sludge in the gall bladder and chronic hepatitis (hepatobiliary system); hydronephrosis, renal cyst, cystitis, urolithiasis etc. (urinary system). Pyometra, stump granuloma, tumour etc (Female genital system); Prostate hyperplasia (Male genital system), Spleenomegaly, Haemangiosarcoma (Spleen); foreign bodies in stomach and intestines, intussusception, intestinal obstruction (Gastro intestinal system) and identification of contents in various hernias (inguinal, interstitial, Enterocele, Cystocele, perineal hernias) were some of the conditions that were diagnosed. Findings of clinical haematological and biochemical parameters were compared to those of radiography and ultrasonography. The merit of ultrasonography in establishing various disorders has been assessed.

RI 8: Ultrasonographic Features of Adrenal Glands in Apparently Healthy Dogs

Shriram G., Mohindroo J., Kumar A. and Mahajan S.K.
Department of Veterinary Surgery and Radiology, GADVASU, Ludhiana (Punjab)

The purpose of the current study was to establish ultrasonologically the adrenal features in apparently healthy dogs. The study was conducted on 40 apparently healthy animals. They were categorized according to age as <1 year, 1-6 years and >6 years and according to body weight as <10 kg, 10-30 kg and >30 kg. The adrenal measurements such as length, cranial and caudal pole height and other features such as shape, ease of scanning, echotexture and echogenicity were observed. The left adrenal could be detected in 98% and the right in 68% of the dogs. There was significant difference of the adrenals measurements between different body weight groups and different age groups.

RI 9: Ultrasonography Detection of Stump Pyometra in a Labrador

Shiju Simon, M., Chhavi Gupta, P. Sankar, R. Ramprabhu and S. Prathaban
Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli (T.N.)

A seven year old female Labrador retriever weighing 27 Kg was brought with the history of foul smelling purulent discharge from the vulva even after spaying. Sterilization was performed sixth years ago. The history revealed that the animal was anorectic, pyrexia, lethargy, weight loss, vomition, diarrhea, excessive thirst and urination since two days. Physical examination revealed elevated temperature (40.3p C) and heart rate (130 bpm) and congested mucous membrane. Abdominal palpation revealed tensed and vaginal examination showed purulent foul smelling discharge and mucous membrane was congested and edematous. Haematobiochemical values observed neutrophilia and elevated blood urine nitrogen (32). Survey radiography of abdomen revealed no abnormalities. Abdominal ultrasonography showed anechoeic shadow below the bladder that was conformed as stump pyometra and surgical correction was performed as per the standard procedure and the animal had an uneventful recovery.

RI 10: Evaluation of Bone Mineral Density in Digital Radiographs using Image Analysing Software

A. Velavan, H.P. Aithal, Amarpal, P. Kinjavdekar, A.K. Pattanaik and A.M. Pawde
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The objective of this study was to evaluate the possibility of analysing bone mineral density (BMD) from the digital radiographs and to assess its accuracy. Analysing bone mineral density is a problem due to the non-availability of Dual–Energy x-ray Absorptiometry in Veterinary Labs. Eight cadaveric canine femur bones were used in the study.

The bones were treated with chemicals for demineralisation (using standard method) to different degrees like 25%, 50%, 75% and 100%. Digital radiographs were taken at different intervals of demineralisation phase. These radiographs were analysed, compared and calculated using pixcavator 5.1 image analysing software and the results were plotted as table and different colours were given to different bone densities. The results were compared with bone ash method of analysing the BMD. The results obtained by image analysing software were comparable to bone ash analysis with more than 95% accuracy. From the results of this study, we can conclude that image analysing software could be used as an alternate method to derive bone mineral density of canine bone.

RI 11: Radioanatomy of Heart size in Mongrel Dogs using Vertebral Heart Score System

Vineet Kumar, A.M. Patel, P.B. Patel and J.V. Vadalia
Department of Veterinary Surgery & Radiology, College of Veterinary Science & Animal Husbandry Junagadh Agricultural University, Junagadh (Rajasthan)

Despite the advent of echocardiography, thoracic radiography remains an integral part of the diagnosis and management of cardiac diseases. Radioanatomy of heart in 20 normal healthy (free from cardiac abnormalities) mongrel dogs were measured using vertebral heart score (VHS) system with Computed radiography machine at Department of veterinary Surgery and Radiology, College of Veterinary Science and AH, Junagadh. Overall, VHS ranged between 8.0 and 11.1 v. Measured range of VHS in male and female was 8.9-11.1 and 8.0 -10.3 v respectively. The overall mean VHS was 9.67±0.22. Measured VHS in male was 10.13±0.25 whereas 9.11±0.3 in female.

RI 12: Ultrasonographic Evaluation of Bovine Gastrointestinal Tract Surgical Affections

Wani, R.A., Bhadwal, M.S., and Gupta, A.K.
Division of Veterinary Surgery and Radiology, SKUAST-J (J.&K.)

The present study was conducted on thirty eight clinical cases of bovines suffering from affections of gastrointestinal tract that included intestinal obstruction due to intussusception (34/38), rumen fistula (2/38), diaphragmatic hernia (1/38) and abomasal fistula (1/38). The ultrasonographic findings of intestinal ileus, passive movement of fluid, hyper-echoic intestinal wall and presence of peritoneal fluid were consistent in animals suffering from intussusception. A significant increase in diameter of intestinal loops (36.16 ± 1.42 mm) was recorded, while a significant ($p<0.05$) decrease in number of loops in one ultrasonographic field was observed (5.88 ± 0.176). In 35.2% (12/34) of animals, a target lesion was detected on ultrasonography. A hyper-echoic area surrounding the hypo-echoic area with multiple reverberations was revealed in animals with rumen and abomasal fistulas. A crescent shaped structure was found at the level of 5th intercostal space in animal diagnosed as diaphragmatic hernia.

ORTHOPAEDIC SURGERY

No. of Abstracts	:	53
No. of Lead Paper	:	01
Lead Paper Speaker	:	Dr. N.H. KELAWALA
Chairman	:	Dr. Dharmaceelan
Co-Chairman	:	Prof. D.B. Patil
Rapporteur	:	Dr. Asit Kumar Maji

ORT-1: Open Reduction and Internal Fixation Supplemented with Fluoroscopy for the Treatment of Humeral 'Y' Fracture in a Dog

T.N. Ganesh, A. Arun Prasad, R. Jayaprakash, Ninad Manjure and Shahid H.D
Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai (T.N.)

A 7 year old male German Shepherd dog was presented with the history of a fall, leading to a non weight bearing lameness in the left fore limb. Radiography revealed a 'Y' fracture of the humerus condyle. The fracture was treated surgically by fixing an eight hole 3.5 mm reconstruction plate, supplemented by a transcondylar lag screw and K-wire under fluoroscopic guidance. The dog started bearing weight intermittently 2 weeks after the surgery. Radiographs of the operated limb 3 weeks after the surgery revealed development of callus. The range of motion of the elbow joint was reduced due to extensive callus formation periarticularly 6 weeks post operatively, without pain on palpation of the surgical site. Dog showed weight bearing lameness after 8 weeks of surgery. The dog was presented for follow up 7 months after surgery and had regained functional usage of the limb.

ORT-2: Autologous Platelet Rich Plasma for Regeneration of Tendon Injuries in Horses

Tina Roshini, S.A. Arun Prasad, B. Justin William, T.N. Ganesh, Ravi Sundar George
R. Sivashankar and M. Bharathidasan
Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai (T.N.)

The study was conducted in twelve limbs of eleven horses, in which autologous PRP in six limbs (Group I) and autologous PRP with fish scale type I collagen scaffold in six limbs (Group II) were engrafted intra lesion into the affected digital flexor tendon by performing ultrasound guided intra lesion injection. The efficacy of autologous PRP and ECM scaffold in regeneration of tendon was assessed using lameness, flexion test score, and ultrasonographic evaluation and biochemical evaluation on 1st, 4th and 8th week post engraftment. Significant decrease in lameness and flexion test score were noticed from pre-injection day to 8 weeks post operatively in both the groups. In group II, ultrasonographically homogeneity of the tendon fibers with more uniformity in healing was noticed. Regenerative therapy for the tendon injury with PRP and PRP with type I collagen was found to be a useful in healing of tendon without injury.

ORT-3: Comparative Evaluation of Two Techniques of Excision Hip Arthroplasty for Management of Canine Hip Dysplasia

Rashmi, H.P. Aithal, Amarpal, P. Kinjavdekar, Sivanarayanan, T.B., Sarit Kumar Patra, Sangeetha, P. and Santhi Jayalekshmi, S.R.
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

Two techniques of excision hip arthroplasty were evaluated in eight dogs affected with hip dysplasia. In one group (n=4), femoral head was approached through standard technique of osteotomy of greater trochanter, whereas in another group (n=4) femoral neck was approached without trochanteric osteotomy by dissecting the plane between tensor fascia lata and biceps femoris. Superficial and middle gluteal muscles were retracted dorsally without excision. Osteotomy of greater trochanter allowed easy access and better visualization of femoral head and neck, resulting in complete resection of femoral neck especially in heavy animals; however, the technique was more traumatic and time consuming as it required replacement and fixation of greater trochanter with the femoral shaft using a lag screw. Whereas in the other technique, tissue trauma was less, but the exposure to the femoral neck was somewhat difficult and at times complete resection of neck and head was not possible. Postoperative lameness and functional recovery were almost similar with both the techniques.

ORT-4: Comparison of *In-Vitro* Biomechanical Properties of Interlocking Nail and Interlocking Nail-Epoxy Pin Constructs in Ostectomized Canine Osteopenic Femur Bones

Velavan, H.P. Aithal, Amarpal, P. Kinjavdekar, A.K. Pattanaik and A.M. Pawde
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

Canine cadaver femur bones of 12 dogs were collected and made 50% osteopenic using chemicals. These bones were randomly divided into 2 groups each containing 12 samples. In one group, 6.0 mm diameter, 14 cm long ILN with 3.5 mm diameter 20 mm long locking bolts were fixed. In another group, 6.0 mm diameter, 14 cm long ILN with 3.5 mm diameter 10 cm long locking bolts, which were interconnected using an epoxy-pin fixation, were used. In both the groups three locking bolts were used to fix the ILN with the bone, one in the proximal fragment and two in the distal fragment. A gap of 5.0 mm was created at the centre of the diaphysis of ILN- bone construct to simulate unstable fracture condition. Both the implant-bone constructs were biomechanically studied under compression and cranio-caudal three point bending (@ speed of 10 mm/min) tests. The findings shall be discussed during presentation.Under both compression and bending tests, yield load (N) and ultimate load (N) of ILN-bone construct was higher than that of ILN-EF-bone construct.

ORT-5: Comparison of In-Vitro Mechanical Properties of Locking Compression Plate with Contoured Tubular Plate in Ostectomized Canine Osteopenic Femur Bones

Velavan, H.P. Aithal, Amarpal, P. Kinjavdekar, A.K. Pattanaik and A.M. Pawde
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

Canine cadaver femur bones of 12 dogs were collected and made 50% osteopenic using standard procedure. These bones were randomly divided into 2 groups each containing 12 samples. In one group, 118 mm long, 8 hole LCP and 3.5 mm locking screws were used. In another group 100 mm long CTP was fixed using 21G cerclage wires. A total of 6 cerclage wires were used to secure the plate-bone construct, three in the proximal fragment and three in the distal fragment. A gap of 5.0 mm was created at the centre of the diaphysis of osteopenic bones to simulate unstable fracture condition. Both the implant-bone constructs were biomechanically studied for compression and cranio-caudal three point bending (@ speed of 10 mm/min). The findings shall be discussed during presentation. In both compression and bending tests, yield load (N) and ultimate load (N) of LCP group was higher than the CTP group. The bending moment of LCP was also higher than CTP.

ORT-6: Concurrent Bilateral Femur and Unilateral Tibia Fracture Repair in a Dog Using Intramedullary Fixation Techniques

Satinder Pal Singh Saini, Simrat Sagar Singh, Tarunbir Singh, Vandana Sangwan and Narinder Singh Saini
Department of Veterinary Surgery and Radiology, GADVASU, Ludhiana (Punjab)

A 1 year old male mixed-breed recumbent dog was presented for severe bilateral hind limb lameness. History revealed accident trauma by a tractor-trolley. Physical examination and palpation, fracture of the right femur, right tibia and left femur were evident. Radiography was performed to confirm the site, location and severity of the fractures and to rule out the pelvic involvement. Both the femurs had comminuted fracture and tibia transverse fracture. Dog was operated under Butorphanol-Acepromazine-Glycopyrrolate, Propofol and Isoflurane combination anesthesia. Both the femur fractures were repaired using open intra-medullary interlocking nailing technique and tibia fracture was repaired using progressive intramedullary pinning technique successfully. Post-operative radiographs showed proper reduction and stable implant placement and fixation in all three fractured bones. Animal started bearing weight on all four legs, without assistance within one week of repair.

ORT-7: Effect of Combined Therapies of Static Magnetic Field, Transcutaneous Electrical Nerve Stimulation on Fracture Healing in Rabbis - A Radiological Study

T. Imtiyaz, B.A. Moulvi, J.D. Parrah, N. Nabi and Gazala Siraj
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry SKUAST-K (J.&K.)

The study was conducted in twelve rabbits divided into two equal groups. A mid- shaft, transverse complete fracture of radius was created using electrical bone saw with two blades creating bone gap of 1.65-2.93mm between fracture fragments. Group 1 acted as control and no therapeutic modality was employed in them. Group 2 rabbits were treated with combined therapies of Static Magnetic Field therapy (SMF) and Transcutaneous Electrical Nerve Stimulation (TENS) therapy. SMF was applied for 6 hours on daily basis for a period of 10 weeks. Two block-shaped static magnets, each of 1000 Guass strength were applied one medially and other laterally. TENS therapy was applied for 10 minutes on daily basis for a period of 10 weeks. The findings shall be discussed during presentation.

ORT-8: Effect of Combined Therapies of Static Magnetic Field and Transcutaneous Electrical Nerve Stimulation on Fracture Healing in Rabbits-A Histomorphological Study

T. Imtiyaz, B.A. Moulvi, J.D. Parrah, Massarat Khan, M. S. Mir and N. Nabi
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences & Animal Husbandry SKUAST-K (J.&K.)

The present study was conducted in 24 rabbits, divided into 4 equal groups. In all the animals fracture was induced using electrical bone saw with two blades creating bone gap of 1.65-2.93mm between fracture fragments. Group 1 acted as control and no therapeutic modality was employed here. Group 2 rabbits were treated with SMF therapy for 6 hours, group 3 with TENS for 10 minutes on daily basis and group 4 with both the therapies together for 6 hours and 10 minutes on daily basis for a period of 10 weeks. The findings shall be discussed during presentation.

ORT-9: Fracture Healing using Biphasic Calcium Phosphate with Dynamic Compression Plating in Goats

Sunaina Gupta, V.P.Chandrapuria and Randhir Singh
College of Veterinary Science and Animal Husbandry, NDVSU, Jabalpur (M.P.

Eight clinical cases of long bone fractures were randomly divided into two equal groups. Open reduction and internal fixation (ORIF) was performed in group I using dynamic compression plate. In group II, ORIF was similar to group I and biphasic calcium phosphate granules were also filled in bone defect at fracture site during the surgical procedure. Implant selection was based on pre-operative radiographic measurements. The animals were subjected to clinical examinations, weight bearing, radiographic examination, haemato-biochemical were carried out on day 0, 15, 30 and 60 time intervals and findings were correlated with fracture healing. Animals of group II showed better healing on radiographic evaluation and earlier weight bearing. There was significant decrease in neutrophil count in group II at day 30 and 60. Lymphocyte count showed a significant increase at day 30 and 60 in both the groups. At day 30, the alkaline phosphatase level in group II was significantly higher than group I. At day 15, serum calcium showed non significant increase whereas serum phosphorus increased significantly. The changes in haemato-biochemical parameters were transient and within normal range with no untoward clinical reactions in response to the treatment suggesting that biphasic calcium phosphate is safe for use in goats.

ORT-10: Incidence of Fracture in Dogs

Randhir Singh, V.P. Chandrapuria, Apra Shahi, M.K. Bhargava and Madhu Swamy
College of Veterinary Science and Animal Husbandry
Nanaji Deshmukh Veterinary Science University, Jabalpur (M.P.)

The overall incidence of fracture was recorded as 0.95 per cent for all species of animals. The incidence of fracture in dog was 0.76 per cent. Dog was observed as the most common species presented with a fracture followed by goat and other species. The mean age was recorded to be 26.32±5.14 months. Fifteen animals (78.95%) were noticed in age group of 12-36 months. Majority of animals were non-descript (42.10%). Fracture was recorded more in male animals (77.78%). An automobile accident (42.10%) emerged to be the major cause of fracture, whereas a fall from height (31.58%) was second common cause of fracture. The femur was found to be the most common bone (47.37%) involved in the fracture, seconded by tibia-fibula (36.84%), which was followed by radius-ulna (15.79 %). The radiographic examination conducted in two orthogonal views revealed that 14 (73.68%) fractures were multiple whereas, 5 (26.32%) fractures were comminuted.

ORT-11: Management of Distal Tibial Shaft Fractures with Hybrid External Skeletal Fixators in Dogs

B. Sailaja, N. Dhana Lakshmi, R.V. Suresh Kumar and P. Jagapathi Ramaiah
Department of Veterinary Surgery & Radiology, College of Veterinary Science, SVVU, Tirupati (A.P.)

Six dogs presented with unstable distal tibial shaft fractures were stabilized with hybrid external skeletal fixator. The fixator was applied with various sizes of indigenously designed stainless steel end threaded half pins, k-wires, connecting rods, circular ring, AO clamps, posts, slotted bolts and nuts according to fracture patient assessment. The Frame stabilization on proximal and distal fragment and outcome of the healing and functional limb outcome were studied with clinical and radiographic evaluation. Based on present study, it was concluded that Hybrid external skeletal fixator was good for stabilization of unstable distal tibial fractures for early limb ambulance and excellent healing. The minor complications of pin loosening and pin tract infection which were noticed could be easily overcome by improving the technique of application and postoperative care.

ORT-12: Long Bone Fractures in Ruminants-A Retrospective Study

J.D. Parrah, B.A. Moulvi, Khadim Hussain Dar, Beenish Qureshi, Hakim Athar, Mehraj-U-Din Dar and T. Imtiyaz
Division of Veterinary Surgery and Radiology, FVSAH, SKUAST-K (J.&K.)

The case records of 59 ruminants presented for treatment of the long bone fractures over a period of one year (January, 2014 to December, 2014) were retrospectively studied. About half of the animals (29/59, 49.15%) with long bone fractures were sheep followed by goats (17/59, 28.81%) and calves (13/59, 22.03 %). Forty one (69.41%) animals were treated with closed reduction and full limb bandaged with plaster and polyvinylchloride (PVC) materials. In 8 (13.55%) animals, intramedullary pinning was done. The hanging pin cast was used in 7 (11.84%) animals while in 3 (5.18%) animals the limb was amputated. In all the cases, hard callus was present at the 8th week post operation. The animals were provided pre-emptive analgesics followed by standard doses for 3 days. All the animals recovered successfully.

ORT-13: C-Arm Guided Tension Band Wiring for Olecranon Fracture Repair in a Dog

D.R. Mer, P.V. Parikh, J.J. Parmar, J.M. Khatri, E.A. Parulekar[1], Sini. K.R., K.S. Gameti and M.S. Bhatia
Department of Veterinary Surgery and Radiology, Veterinary College, AAU, Anand (Gujarat)

A four year old dog was presented with a history of accidental trauma leading to limping in right fore-limb and

swelling at elbow region. Physical examination revealed crepitation and pain on palpation. Medio-lateral view radiograph of right elbow revealed Morey type I non comminuted extra-articular fracture of olecranon. The fracture site was approached by skin incision on caudal aspect of the olecranon. Two Kirschner (K) nails of 2.5 mm diameter were inserted through the olecranon into the ulna, directed distally and slightly cranially to penetrate the cranial cortex of the proximal ulnar shaft. A hole was drilled in transverse direction distal to the fractured end of the ulna and a 20 gauge stainless steel wire was passed through that hole. Its free ends were brought across each other in the form of figure 8 and were fixed over hooks of K wire and tightened. Immobilization of affected limb was done by applying Modified Robert-Jones bandage. Clinical healing was observed after 1 month through radiography.

ORT-14: Effect of Combined Therapies of Static Magnetic Field, Transcutaneous Electrical Nerve Stimulation on Fracture Healing in Rabbis-An Experimental Study

T. Imtiyaz, B.A. Moulvi, J.D. Parrah, N. Nabi and Q.A. Khan
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry SKUAST-K (J.&K.)

The present study was conducted in twelve rabbits divided into two equal groups. A mid- shaft, transverse complete fracture of radius was created using electrical bone saw with two blades creating bone gap of 1.65-2.93mm between fracture fragments. Group 1 acted as control and no therapeutic modality was employed in them. Group 2 rabbits were treated with combined therapies of Static Magnetic Field therapy (SMF) and Transcutaneous Electrical Nerve Stimulation (TENS) therapy. SMF was applied for 6 hours on daily basis for a period of 10 weeks. Two block-shaped static magnets, each of 1000 Guass strength were applied one medially and other laterally. TENS therapy was applied for 10 minutes on daily basis for a period of 10 weeks. Two surface electrodes covered with ultrasound gel were applied on fracture site one medially and other laterally. The nerve stimulator was started at the lowest frequency possible and increased gradually till the animal tolerated the sensation of the stimulation. Clinico-physiological parameters studied include: Behavior, swelling at the site of incision, pain on palpation, weight bearing, temperature, respiration and heart rate. The treated Group showed positive correlation, early restoration with clinical parameters and had no adverse effect on physiological parameters.

ORT-15: Effect of Transcutaneous Electrical Nerve Stimulation on Fracture Healing in Rabbis

T. Imtiyaz, B.A. Moulvi, J.D. Parrah, H. Athar, and N. Nabi
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry SKUAST-K (J.&K.)

The present study was conducted in twelve rabbits were divided into two equal groups. A mid- shaft, transverse complete fracture of radius was created using electrical bone saw with two blades creating bone gap of 1.65-2.93mm mm between fracture fragments. Group 1 acted as control and no therapeutic modality was employed in them. Group 2 rabbits were treated with TENS therapy for 10 minutes on daily basis for a period of 10 weeks. Two surface electrodes covered with ultrasound gel were applied on fracture site one medially and other laterally. The nerve stimulator was started at the lowest frequency possible and increased gradually till the animal tolerated the sensation of the stimulation. Clinico-physiological parameters studied include: Behavior, swelling at the site of incision, pain on palpation, weight bearing, temperature, respiration and heart rate. The treated Group showed positive correlation with clinical parameters and had no adverse effect on physiological parameters.

ORT-16: Studies on Economical External Skeletal Fixators in Long Bone Fracture Repair of Calves

Rajesh Kumar, Ramesh Tiwary, G.D. Singh and Mithlesh Kumar

A total twelve clinical cases of compound fracture of long bone in calves were reported during Jan. 2014 to may 2015. Out of twelve clinical cases of compound fracture, four observed in tibia-fibula, three in radius-ulna and five in metatarsal bones. All clinical cases of compound fracture were stabilized with epoxy ESF. Routine pre-operative, operative & post-operative follow as per schedule. Weight bearing after operation was noticed in eight clinical cases. Pin tract infection is noticed in all clinical cases of calves, but severe pin tract infection & loosening of pins were seen in four cases. Full functional weight bearing after device removal in six cases & partial in three cases observed. Mortality observed in three clinical cases of calf.

ORT-17: Evaluation of Comparative Efficacy of Locking Compression T Plate and Cross Intramedullary Pin Fixation for Treatment of Distal Third Femur Fractures in Canine

Sarit Kumar Patra, Rekha Pathak, H.P.Aithal, Amarpal, Abas Rashid Bhat, Shanti Jayalekshmi, Rashmi Singh, Deepesh Guatam, Swarupananda Sahu and Dipti Sharma
Division of Surgery, Indian Veterinary Research Institute, Bareilly (U.P.)

The study was conducted in 14 clinical cases of distal third femur fracture recorded from July 2014 to May 2015 in RVP, IVRI, Izatnagar, Bareilly (U.P), India. Animals were randomly assigned into two groups (Group-I and Group-II) having seven animals in each group. In group I, fracture fixation was done with cross intra medullary pinning using two K-wires/Steinmann pins of appropriate size. In group II, 3.5mm modified locking compression stainless steel T plates were used. For each case, pre surgical evaluation of the radiographs was done and in two cases one wing of the plate was cut to contour the plate to the approximate shape of the condyle and in other cases plates were applied with their normal configuration. Post operative management was carried out in a routine manner (a course of antibiotics, analgesics, oral calcium and multivitamin with regular dressing of surgical site). A modified, light Robert Jones bandaging of the affected limb was done in all cases. Thereafter the animals were monitored at different time intervals for surgical wound healing, weight bearing (during standing, walking and running),evaluation of functional status of stifle joint, rotational movement, radiographic fracture healing, post operative pain and inflammation, limb usage after 2 months, haematological parameters(Hb, TLC, DLC, Calcium, Phosphorus and Alkaline phosphatase). Comparison of modified locking compression T plate and cross intra medullary pinning for surgical management of distal femur fractures in fourteen dogs was done. It was observed that use of modified locking compression T plate although technically difficult to perform, more time consuming yet it was a better technique as it provided rigid fixation and stabilization with stable reduction with post operative complications.

ORT-18: Evaluation of Diverse Immobilisation Techniques for Mandibular Fracture Repair in Camels (*Camelus dromedarius*)

M.C. Parashar and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science Navania, RAJUVAS (Rajasthan)

The study was conducted on 18 camels (16 males and 2 females) which were diagnosed mandibular fractures. These animals were divided in 3 groups, comprising 6 animals in each group. Group I was considered as control group- animals of this group were treated by interdental wiring technique (I.D.W. technique). Group II animals were treated by I.D.W. and transfixation of pins with fiber cast technique. Group III animals of this group were treated by I.D.W. and a Scaffold of fiber cast bandage technique. The mandibular fracture was bilateral in nature in all the 18 camels. The Interdental wiring technique together with application of a fiber cast provided adequate immobilisation

of fractured fragments even in multiple and oblique fractures where I.D.W. alone led to overriding and shortening of jaw. The fiber cast scaffold applied in animals of group-III prevented latero-medial and downward movements of mandible, thus loosening of wire did not occur. The technique (group III) proved costlier to I.D.W technique (group I) due to additional cost of fiber cast bandage but proved slightly cheaper than the techniques used in animals of group-II which incurred an additional cost of intra-medullary pins.

ORT-19: Amputation of Fractured Tibia and Fibula Bones in a Rabbit

Deepak Kumar Kashyap, Devesh Kumar Giri and Govina Dewangan
Department of Veterinary Surgery & Radiology, Arawali Veterinary College, Sikar (Rajasthan)

A male, rabbit aging 6 months was presented to the Department of Veterinary Surgery and Radiology, Arawali Veterinary College, Sikar, Rajasthan with the history of accidental injury due to falling from height, inability to bear weight on its left hind limb. The fractured fragments of tibia and fibula were easily visible and palpable. On the basis of history, physical observations and radiographic findings the case was diagnosed as a compound fracture of tibia and fibula. Desensitization of the part was achieved by ring block with local infiltration of 2% lignocaine hydrochloride just below the tourniquets. The skin between fragments was cut and distal fragment was removed. The edges of the proximal fragment and skin were trimmed for proper alignment of skin edges. Irrigation with normal saline and antiseptic powder were sprinkled inside the wound cavity. Post operatively, Tablet Cefotaxim 100 mg and Diclofenac sodium 25 mg, OID, orally was given for 5 days. Cutaneous sutures were removed on 12th post-operative day. Animal was completely recovered on 15th day.

ORT-20: Evaluation of Symphytum Officinale as an Osteoinducer in Healing of Fracture in Goats

Bagwan Faruk Ilahi, S.P. Mehesare, M.G. Thorat, R.V. Raulkar and Fani Farheen Anjum
Department of Veterinary Surgery, Veterinary College, Akola (Maharastra)

Clinical studies on 18 cases of long bone fractures in goats with the use of osteoinducer Symphytum officinale were undertaken. These cases were distributed in three groups, in group A immobilization was achieved by applying plaster of paris bandage, as control. In group B immobilization with Plaster of Paris + Symphytum officinale 30C potency was given orally @ 5 pills two times in a day up to 40th post immobilization day and in group C immobilization with fiber glass cast + Symphytum officinale 30C potency was given orally @ 5 pills two times in a day up to 40th post immobilization day. It is concluded that fiber glass cast +Symphytum officinale 30C potency was considered as a better orthopedic modality than Plaster of Paris cast for fracture healing in goats.

ORT-21: Excision Arthroplasty for Hip Disorders in Dogs

Srinivasa Murthy. K.M., Vasanth. M.S and Nagaraja.B.N.
Veterinary College, KVAFSU, Bangalore (Karnataka)

Excision arthroplasty of the hip was carried out in six clinical cases of dogs having hip disorders. Femoral head was completely excised along with lesser trochanter through craniolateral approach to hip joint. Surgery was performed in two dogs with severe hip dysplasia, two dogs with osteoarthritis of hip, one dog with chronic hip dislocation and one dog with fracture of femoral head and neck. The postoperative radiographs showed complete separation of the proximal femur and acetabulum with no bony proliferation. Clinically excision arthroplasty was effective in alleviating the pain in all the dogs and a fair return of limb function was observed. The excision arthroplasty was found to be a successful procedure for hip disorders to alleviate pain where total hip replacement is not feasible.

ORT-22: Fracture with Dislocation of Stifle Joint in a Labrador Pup and its Management

Deepak Kumar Kashyap, Devesh Kumar Giri and Govina Dewangan
Department of Veterinary Surgery and Radiology, Arawali Veterinary College, Bajor, Sikar, (Rajasthan)

A 2-months-old Labrador pup was admitted with the complaint of accidental injury by automobile leads to inability of weight bearing, difficulty during sitting and improper gait was presented. Clinical examination showed fracture of stifle joint with typical crepitating sound and multidirectional movement of the affected limb. Radiograph revealed fracture of distal metaphysis of femur and fibular tarsal bone. The light plaster of paris cast was applied over the affected part. For extra support, the Modified Thomas splint was also applied after cast. Due to negligence by the owner and self-mutilation, on 3rd day the plaster was removed by animal. Finally the fiber cast was applied for better strength and owner was advised for Elizabethan collar to prevent self-mutilation. A lateral radiograph obtained after 4th weeks, confirmed radiological union of fractured part with little beat fixation of the joint were observed. Fiber cast were removed on same day.

ORT-23: Management of Distal Femoral Shaft Fractures with String of Pearls Locking Plate in Dogs

K. Manoj Kumar, V. Devi Prasad, N. Dhana Lakshmi, N.K.B. Raju, K. Sudarshan Reddy, D. Vijaya Kumari, M.S.S.V. Phaneendra and M. Sai Baba
Department of Veterinary Surgery & Radiology, College of Veterinary Science, SVVU, Tirupati (A.P.)

Dogs presented to the college hospital with distal femoral diaphyseal fractures were diagnosed and the breed, age and sex wise incidence of these fractures was studied. Selected cases of 6 dogs of 10-22 months age of either sex were stabilized with imported String Of Pearls (SOP) locking plates (Orthomed, UK). The outcome of fracture stabilization and healing was evaluated with lameness grading, radiography and biochemical analysis. Radiographical assessment revealed stability of implant was good in all cases. Based on present study it was concluded that, String of Pearls (SOP) locking plates were good for stabilization of distal femoral shaft fractures for early limb ambulance and excellent healing. The following advantages of SOP locking plates over conventional dynamic compression plates were found as contouring according to shape of bone, high bending strength and application of standard cortical screws as locking screws.

ORT-24: Management of Mandibular Fracture in Dogs with Different Fixation Devises

S. Goswami and D. Ghosh
Department of Veterinary Surgery & Radiology, Faculty of Veterinary and Animal Sciences
West Bengal University of Animal and Fishery Sciences, Kolkata (W.B.)

The study was carried out on clinically presented mandibular shaft fracture in dog diving randomly into 3 groups (n=6). The fractures were immobilized by intramedullary pin with tension band wiring (Gr. I), Bone plating (Gr. II) and External Skeleton Fixators (ESF) of Polymethylmethacrylate (GR.III) .The evaluation of fracture healing was relied upon the clinical , serological (ALP, Calcium and phosphorous) and radiological assessment on weekly intervals for a duration of 6 weeks. The animals of Group I, II and III started taking of soft diet on 7th, 6th and 3rd, days of operation respectively. The symptoms of oral infection, halitosis was observed in some dogs of Group I and II. The X- ray in post operative days revealed union of fractured mandible in 35 days in the dogs of Group III and in other dogs after 6 weeks. Complication like delayed and non union was observed in the dogs of Group I and II. The serum biochemistry did not show any remarkable alteration in between the groups as well as intervals. It was concluded from the study that immobilisation of fracture of mandible shaft by ESF of PMMA gives firm, stable fixation of fragments with minimum trauma to the soft tissue as well as early and uneventful fracture healing within 5 weeks.

ORT-25: Management of Traumatic Achilles Tendon Rupture Using Epoxy-Pin External Skeletal Fixation in a Cat

Madhu D.N., Ahmad R.A., Dubey P., H.P. Aithal, P. Kinjavdekar, Sivanarayanan, T.B., Rohit Kumar, A.M. Pawde and Amarpal
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

A three-year-old non-descript male cat of 3.5 kg body weight was presented with the history of injury to the right hind limb. During clinical examination the ruptured ends of the tendon were clearly seen. Anamnesis revealed that the injury was caused due to broken glass pieces found in the house. Clinical examination revealed that there was a complete disruption of distal end of the Achilles tendon resulting in tarsal hyperflexion. Radiographic examination did not reveal any fracture. The ruptured ends of the tendon were surgically anastomosed and the joint was immobilized using an epoxy-pin external skeletal fixation. The animal recovered completely without any complications by 8 weeks. Our results suggest that surgical correction in combination with epoxy-pin external skeletal fixation can be an option for cats with ruptured Achilles tendon.

ORT-26: Effect of Static Magnetic Field Therapy on Fracture Healing In Rabbits-A Clinico-Physiological Study

T. Imtiyaz, B.A. Moulvi, J.D. Parrah, N. Nabi, Mehraj-ud - Din Dar, and Beenish Qureshi
Division of Veterinary Surgery and Radiology, FVSAH, SKUAST-K (J.&K.)

The present study was aimed to evaluate the effect of SMF (Static Magnetic Field Therapy) on fracture healing in rabbits. Twelve rabbits were divided into two equal groups. A mid- shaft, transverse complete fracture of radius was created using electrical bone saw with two blades creating bone gap of 1.65-2.93mm mm between fracture fragments. Group 1 acted as control and no therapeutic modality was employed in them. Group 2 rabbits were treated with SMF therapy for 6 hours on daily basis for a period of 10 weeks. Two block-shaped static magnets, each of 1000 Guass strength were applied one medially and other laterally. Clinico-physiological parameters studied include: Behavior, swelling at the site of incision, pain on palpation, weight bearing, temperature, respiration and heart rate. The treated Group showed positive correlation with clinical parameters and had no adverse effect on physiological parameters.

ORT-27: Surgical Management of Bilateral Mandibular Fracture in a Dog

Ramanathan, S., **Harish Kulkarni,** Rani and Rajalingam
TVCC, Veterinary College, KVAFSU, Bidar (Karnataka)

A six year old, male, non descriptive dog weighing 18kg presented to the private clinic with a history of automobile accident and showing signs of dropped jaw, drooping of saliva and unable to take food and water. On clinical examination, bilateral transverse fracture at mid horizontal ramus of mandible noticed with drooling of blood tinged saliva noticed. Surgical immobilization of fractured fragments was decided. Right side of the fractured mandible was immobilized using 2.5 mm dynamic compression plate (DCP). Left side of the fractured horizontal rami of the mandible fragment was immobilized with interdental or interfragmentary wiring technique using orthopaedic wire. Animal recovered uneventfully without any complications.

ORT-28: Repair of Diaphyseal Femoral Fracture using Intramedullary Pin and Cerclage Wire in a Cat

Shiju Simon, M., Chhavi Gupta, P. Sankar, R. Ramprabhu and S. Prathaban
Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli (T.N.)

A two year old tom cat weighing 3.8 kg was presented with the history of automobile accident followed by non-

weight bearing lameness of right hindlimb. Palpation of the right femur indicated pain, swelling and crepitus. Confirmative diagnosis of an oblique over-riding femoral diaphyseal fracture was made by radiographic evaluation of lateral and craniocaudal views. The cat was anaesthetized using xylazine and ketamine at the dose rate of 1mg/kg and 20mg/kg (cocktail) intramuscularly. The anaesthesia was maintained by ¼ to ½ the dose of ketamine intravenously as and when required. A craniolateral skin incision was made and fracture site was exposed and a smooth trocar pointed 3.5mm Steinmann pin was inserted in a retrograde fashion. Then two cerclage wires (22mm) were applied, one on most proximal part of the fracture site and other on most distal part of the fracture site. Muscle and skin were apposed using no.1-0 PGA in continuous pattern and silk as a cruciate pattern. Post-operative radiography revealed adequate alignment and the pin was removed on the day 45th. Weight bearing was noticed on immediate post-operative day.

ORT-29: Repair of Femoral Shaft Fractures by Elastic Plate Osteosynthesis using Veterinary Cuttable Plates in Young Dogs

K. Sudarshan Reddy, N. Dhana Lakshmi, P. Veena, N.K.B. Raju, K. Manoj Kumar, D. Vijaya Kumari, M.S.S.V. Phaneendra and M. Sai Baba

Department of Veterinary Surgery & Radiology, College of Veterinary Science, SVVU, Tirupati (A.P.)

Young dogs presented to the college hospital with unstable femoral diaphyseal fractures were diagnosed and the breed, age and sex wise incidence of these fractures was studied. Selected cases of 12 young dogs of 2-5 months age group and body weight range between 4-11 kg of either sex were stabilized with indigenously designed 2.7 mm or 2.0 mm VCP along with compatible size of 2 or 3 cortical screws only on each fracture fragment avoiding growth plates increasing elasticity of the plate without any rigidity by Elastic Plate Osteosynthesis technique. The findings shall be discussed during presentarion. Based on present study it was concluded that, Application VCP by Elastic Plate Osteosynthesis technique in femoral diaphyseal fractures was more advantageous than rigid plate osteosynthesis and intramedullary pinning by reducing the stress shield effect on bone and hastened the bone healing by allowing micromotion at the fracture site to more closely mimic biological healing and is more reliable than any other internal fixation techniques as it did not interfere with functional growth plates in young dogs.

ORT-30: Successful Surgical Repair of Mandibular Fractures by Interdental Wiring in Dogs

P. Vidya Sagar, M. Raghunath, P. Ravi Kumar, B. Silaja, N.V.V. Hari Krishna and V.S.C. Bose

Teaching Veterinary Clinical Complex, N.T.R. College of Veterinary Science, SVVU, Gannavaram (A.P.)

A total of 7 dogs were presented with a history of trauma caused by automobile accidents and dog bite injury resulting in mandibular fractures. Out of which 2 were symphysial fractures with avulsion of lower lip and remaining five were bilateral fractures of horizontal ramus of the mandible. Surgical repair was performed under general anesthesia, symphysial fractures were stabilized by trans symphysial k-wire and interdental wiring using 22g wire. Bilateral mandibular fractures were stabilized by interdental wiring and with external support using muzzle tape was provided. Fracture healing was completed by the 6th post operative week without any post operative complications. Interdental wiring along with external muzzle application is recommended in the successful repair of mandibular fractures compared with other methods such as plating and IM pinning because of economic reasons and postoperative complications.

ORT-31: Successful Surgical Management of Femur Fracture in a Cat by Intramedullary Pinning

Bhajan Chandra Das and Bibek Chandra Sutradhar

Department of Medicine and Surgery, Chittagong Veterinary and Animal Sciences University, Chittagong (Bangladesh)

An eight months old intact male Thai Perssian cat weighing 2.8 kg was brought to Teaching Veterinary Hospital,

Chittagong Veterinary and Animal Sciences University with the history of limping in right hind limb since 2 days. Clinical examination revealed the cat was active and alert but mild weight bearing limping in right hind limb, pain and crepitation also noticed in affected limb. Radiographic examination confirmed the right distal overriding transverse femur fracture. A 3 mm retrograde intramedullary pinning was done with standard surgical approach and xylazine and ketamine anaesthesia. Postoperatively cat was managed by systemic antibiotic and pain killer with protective bandage. Improved weight bearing was observed on the 8th postoperative day and sutures were removed on same day without any wound complications. Postoperative the 18th days, improved weight was observed clinically and bone healing was noticed on radiographic examination. The present case study suggests the intramedullary pinning is an effective method for internal fracture fixation in cat.

ORT-32: Successful Surgical Management of Overriding Short Oblique Femur Fracture in a Labrador Dog

Bhajan Chandra Das and Bibek Chandra Sutradhar
Department of Medicine and Surgery, CVASU, Chittagong (Bangladesh)

The present case report describes the successful surgical management of femur fracture in a dog. A 2 months old female Labrador dog 8 kg body weighing was admitted to the Teaching Veterinary Hospital, Chittagong Veterinary and Animal Sciences University, Bangladesh with a history of traumatic injury in left hind limb since 2 days. Clinical examination revealed active, alert and non weight bearing limping in left hind limb and orthopaedic examination shown pain and crepitation and no neurological abnormality. Radiographic examination revealed overriding short oblique midshaft diaphyseal femur fracture and decision was taken to manage by intramedullary pinning. A 3.5mm Steinmann pin was used for intramedullary pinning in retrograde technique. At 60 days of post operation pin was removed and dog regain its normal function. The present study suggests that intramedullary pinning is a suitable method for management of short oblique femur fracture in dogs.

ORT-33: Surgical Management of Complicated and Chronic Olecrenon Bursitis in Dogs-A Report of 10 Cases

A.K. Maji, Pintu Khan, Sanjay Goswami, P. Nag , P. Das and S. Mahapatra
Department of Veterinary Surgery and Radiology, Faculty of Veterinary and Animal Sciences
West Bengal University of Animal and Fishery Sciences, Kolkata (W.B.)

Chronic bilateral Cystic bursitis in an adult great Dane and 5 unilateral one each in an adult golden retriever, an adult Labrador retriever, one adult Spitz, two adult G.S.D. and one 7 months aged G.S.D. pup were surgically operated with no recurrence .Operations were done under general anesthesia, with elliptical incision, blunt dissection and complete enucleation of the bursal cysts leaving only the exposed periosteal surfaces followed by routine closure. Out of other adult four dogs-one G.S.D. bitch, two golden Retrievers and one Labrador retriever each had the history of either aspiration replacing counter irritant application with bandaging or repeated operations or mere cystic fluid drainage and application of counter irritant were operated . On histological examination these were locally invasive haemangiopericytoma with no recurrence, recurring myxoid fibrosarcoma with no metastasis, locally invasive recurring hystiocytoma and metastatic squamous cell carcinoma, respectively.

ORT-34: Surgical Management of Contracted Flexor Tendon- Report of Four Cases

Raju Sharda, M.O. Kalim, Govind Netty and Narottam Gopal
Department of Veterinary Surgery & Radiology, College of Veterinary Science & Animal Husbandry
Anjora, Durg (C.G.)

A total of four cases (2 Sahiwal calves) and (2 non descript cow calves) with knuckling came for treatment in the department. One sahiwal calf and two nondescript calves had bilateral knuckling at metacarpal region and one

remaining calf suffered from bilateral knuckling at carpal region. The calves were given oxytetracycline 10mg/kg body weight intravenously along with normal saline infusion. After proper restraining, local analgesia was achieved with 2% Lignocaine hydrochloride infiltration at mid metacarpal and carpal region. The flexor tendon was severed with joints extended and haemorrhage was controlled. Betadine solution and powder was applied at the site of transaction. Medial and lateral bamboo splint were applied after sufficient padding and bandaged tightly. Post operatively injection ceftriaxone, meloxicam and tribivet were given intramuscularly at standard dose rate for 5 days. Bandage padding was changed at 4 days interval. All calves were walking with 90% correction after three weeks.

ORT-35: Total Hip Replacement for Hip Disorders in Dogs

Srinivasa Murthy. K.M., Vasanth. M.S. and Nagaraja, B.N.
Veterinary College, KVAFSU, Bangalore (Karnataka)

Total hip replacement was performed in six clinical cases of hip disorder in dogs using custom made bar stock of medical grade stainless steel of 316 L by manual machining process. Four prototypes were tested on different dogs one after the other and finally a good prosthetic was evolved overcoming the drawback of previous model. The final model was applied to two dogs with osteoarthritis of hip, two dogs with hip dysplasia, one dog with chronic hip dislocation and one dog with fracture of femoral head. Five dogs gained complete functional ability of the joint without any lameness. One dog suffered from sciatic neuropraxia immediate postoperatively and subsequently recovered completely after treatment with prednisolone and B complex vitamins. The locally designed total hip implants were highly economical, require less instruments for application, technique was simple and recovery was uneventful.

ORT-36: Use of Threaded Pins for the Treatment of Distal Fractures of Long Bones-Report of Three Cases

V. Mahesh, S. Ravikumar and L. Ranganath
Department of Surgery and Radiology, Veterinary College, KVAFSU, Bangalore (Karnataka)

Humeral diaphyseal fractures result in disruption of the continuity of the cortical bone and are common in dogs. They represent approximately 10% of all limb fractures and 34% of the forelimb fractures. Two dogs, non descript and cocker spaniel aged two years and five months respectively and a cat aged about nine months were presented with the history of trauma and non weight bearing lameness on right forelimb, right hind limb and left hind leg respectively. Physical examination revealed swelling and crepitus on palpation of affected site. Radiography of affected limb revealed complete oblique diaphyseal fracture of distal one third humerus in non descript dog, distal one third fracture of right and left femur in cocker spaniel and cat respectively. In all the patients, fracture assessment score was three. Fracture was stabilized with threaded intramedullary pin. Postoperatively animals were given cage rest for ten days and restricted exercise for a month. Animals started bearing weight after 45 days and gait was normal.

ORT-37: Veterinary Orthopaedic in Bangladesh: Successful Surgical Management of a Tibial Fracture in an Indigenous Dog

Bhajan Chandra Das and Bibek Chandra Sutradhar
Department of Medicine and Surgery, CVASU, Chittagong (Bangladesh)

A two-year-old male indigenous dog, weighing 20 kgs was brought with the history of limping in the right hind limb since 24 hours. Clinical examination revealed lifting the limb and abnormal gait and posture, small open wound in medial tibia, swelling, crepitation and mild oozing. C-arm examination revealed the midshaft diaphyseal tibial fracture and decided for plating. Blood examination values in the preoperative stage were normal. A 3.5 mm 10 hole dynamic compression plate was used for fracture management under atropine and xylazine premedication and

ketamine, diazepam cocktail for induction and maintenance as standard protocol. Postoperative treatment was followed antibiotic, pain killer, antihistamines and advice were given to complete rest for at least 2 weeks with a modified Robert Jones bandage. Postoperatively, the clinical symptoms, lameness, functional outcomes and radiographic evaluation were studied at different intervals. Immediate postoperative examination shown that the implant in situ, postoperative day-3 revealed improved weight bearing (grade - iv) and day-7 shown grade –iii weight bearing, day-30 functional outcome was excellent and primary fracture healing was observed. Postoperative day-60, radiographic examination shown implant in situ and complete primary healing. Blood seroma, swelling and open plate were noticed on postoperative day-7 on distal to the surgical wound. Orthopaedic surgery gives a better life for the patient and satisfaction to the owner for their personal daily life.

ORT-38: Surgical Management of Supracondylar Femoral Fracture by Lateral Tibial Head Buttress Plate in Clinical Cases of Dogs

Nagaraja B.N., Vasanth M.S. and Rajpeer B.
Department of Veterinary Surgery and Radiology, KVAFSU, Veterinary College, Bangalore (Karnataka)

A 3.5mm broad LTHB plates were used to stabilize the Supracondylar femoral fractures in 6 clinical cases of dogs. The Radiological studies and weight bearing pattern on different postoperative days suggested that the LTHB was an effective method for the stabilization of Supracondylar femoral fracture without any axillary support and postoperative complications.

ORT-39: Modified Type-Ii ESF with Wooden Planks as Connecting Bars for the Management of Tibial Fractures in Various Domestic Animals

Nagaraja B.N., Vasanth M.S. and Shivakumar E.
Department of Veterinary Surgery and Radiology, KVAFSU, Veterinary College, Bangalore (Karnataka)

Tibial fractures in various domestic animals were stabilized with modified type-II ESF with wooden planks as connecting bars. The Weight bearing pattern of the operated limb and postoperative radiographs (to assess the fracture healing), suggested that the technique can be used for repair of tibial fractures in any sized domestic animals. The wooden planks were easy to craft as per need at the time of operation and they supported the body weight without any postoperative complications. All the animals used the operated limb immediately after the operation and ESF assembly was removed on 60th postoperative day.

ORT-40: Effect of Different Time Intervals of Static Magnetic Field Therapy on Bone Healing in Rabbit

F.H. Dedmari, J.D. Parrah, B.A. Moulvi, H. Athar and M.S. Mir
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences & Animal Husbandry SKUAST-K (J.&K.)

The study was conducted on 24 apparently healthy rabbits divided into 4 equal groups to study the influence of duration of application of the static magnetic field therapy on induced radial fracture healing in rabbits. Two block shaped static magnets each of 1000 Gauss constant strength, were applied at the fracture site, one medially and other laterally for a period of 2, 4 and 6 hours on daily basis for a period of 8 weeks in the animals of Groups A, B and C respectively. Animals of group D served as control and were not exposed to the application of any SMF therapy. Radiographic, histopathological and alkaline phosphatase activity estimation indicated superior healing in the animals of group C.

ORT-41: Effect of Static Magnetic Field therapy on fracture healing in rabbits-A Radiological Study

T. Imtiyaz, B.A. Moulvi, J.D. Parrah, N. Nabi, Q.A. Khan and N. Handoo
Division of Veterinary Surgery and Radiology, FVSAH, SKUAST-K (J.&K.)

The present study was aimed to evaluate the effect of SMF therapy on fracture healing in rabbits. Twelve rabbits were divided into two equal groups. A mid- shaft, transverse complete fracture of radius was induced using electrical bone saw with two blades creating bone gap of 1.65-2.93mm mm between fracture fragments. Group 1 acted as control and no therapeutic modality was employed here. Group 2 rabbits were treated with SMF therapy for 6 hours. Two block-shaped static magnets, each of 1000 Guass strength were applied one medially and other laterally on daily basis for a period of 10 weeks. A slight increase in gap was observed by week 1 which started decreasing from week 2 postoperatively in both the groups. The reduction in gap was progressive in both the groups but faster in treatment group. Complete union i.e., 100% reduction was seen by week 9 postoperative in treated group, while in the animals of control group only 97.31% reduction was achieved at the end of the study period.

ORT-42: Management of Femur Fracture in Kitten- A Case Report

J. Khurma, Ravendra Singh and T.K. Gahlot
Department of Veterinary Surgery and radiology, College of Veterinary and Animal Science
Rajasthan University of Veterinary and Animal Sciences, Bikaner (Rajasthan)

A kitten of 5 month age was presented to TVCC, CVAS, RAJUVAS, Bikaner with a history of trauma, excessive pain and swelling in left hindlimb. Radiograph of left hind limb revealed complete fracture of femur near condyles. Thomas splint was made using aluminium rod and then applied after proper stretching of left hindlimb using adhesive bandage. The owner was advised for providing complete rest to kitten for 25 days. Broad spectrum antibiotic Gentamicin (3 mg/kg b.wt. IM for 5 day), non-steroids anti-inflammatory drugs Meloxicam (0.2 mg/kg b.wt, IM for 3 day) and Intacal pet (calcium syrup, 2ml b.i.d. orally for 30 day) were administered. After 25 days a complete callus formation around fracture line was observed in radiograph and kitten started bearing weight on fractured limb. Uneventful recovery was seen.

ORT-43: Surgical Repair of Unstable Diaphyseal Long Bone Fractures in Dogs with Dynamic Compression Plating

Cahitanya Sankar, **M. Raghunath,** N.V.V. Hari Krishna, P. Vidya Sagar, P. Ravi Kumar and V.S.C. Bose
Teaching Veterinary Clinical Complex, N.T.R. College of Veterinary Science, SVVU, Gannavaram (A.P.)

The study was conducted on six clinical cases of dogs presented with seven unstable long bone fractures followed by trauma. The fractures included four tibia, two radius and ulna and one femur. Under general anesthesia open reduction and internal fixation with dynamic compression plate was done as compression plate in four and neutralization plate in three fractures. Post operatively external coaptation in the form of Robertjones bandaging was done for 10 days. Intraoperative stability, post operative weight bearing score system, hematobiochemical changes and complications were studied. All the dogs were showing complete weight bearing on the operated limb and fracture healing by eight weeks post operatively. Clinical outcome and complications will be discussed.

ORT-44: Successful Surgical Repair of Grade Lv Lateral Patellar Luxation by Wedge Recession Sulcoplasty and Medial Retinacular Imbrication in a Dog

M. Raghunath, P. Vidya Sagar, P. Ravi Kumar, N.V.V. Hari Krishna B. Silaja and V.S.C. Bose
Teaching Veterinary Clinical Complex, N.T.R. College of Veterinary Science, SVVU, Gannavaram, (A.P.)

A male, 8months old, Tibetan Mastiff, weighing around 32kg was presented with improper weight bearing and

gait on hind limbs, crouched hind limb stance and inability to walk even short distances with visible hind limb muscular atrophy. Physical examination revealed Grade lV lateral patellar luxation of left femur and confirmed by lateral and cranio caudal stifle radiographs. Under general anesthesia, lateral stifle arthrotomy was performed and degenerative changes were evident on trochlear groove and inner surface of the patella. The trochlear groove was shallow and patella was permanently adhered to the lateral condyle of the femur. Lateral retinacular release, wedge recession sulcoplasty and medial retinacular imbrication was done after replacing the patella in the trochlear groove. The dog started to have erect posture, partial weight bearing on the operated limb on the 2ndpost operative day, which showed gradual improvement and complete rehabilitation of the dog.

ORT-45: Platelet-Rich Plasma: A Novel Approach for Fracture Healing

Randhir Singh, V.P. Chandrapuria, Madhu Swamy, Apra Shahi and M.K. Bhargava
Department of Veterinary Surgery, *College of Veterinary Science and Animal Husbandry NDVSU, Jabalpur (M.P.)*

Platelet-rich plasma (PRP) was harvested by collecting peripheral venous blood aseptically in heparinised test tubes and pooled together. The platelet count of the pooled whole blood was determined to be 183x103/ µl and it was elevated to 568x103/µl for PRP. In all cases of fracture, the stable internal fixation of fracture fragments was achieved and â-TCP was filled in a cylinder of composite mesh. One milliliter of PRP was administered locally at fracture site. At 90th day, the mean radiographic score was highest (4.50±0.22) for PRP group. At 90th day the mean weight bearing score (while standing) was recorded 2.00±0.00 in PRP group. The mean weight bearing score (while walking) was significantly higher ($p<0.05$) at 90th day in PRP group. The mean weight bearing score (while running) was also recorded highest in PRP group showing that restoration of the function was better and earliest in PRP group.

ORT-46: Successful Surgical Management of Traumatic Gastric Fistula in a Non-Descript Dog

A.S. Patil, Ramesh Rathod, B.N. Nagaraja, L. Ranganath and M.S. Vasanth
Veterinary Hospital, College of Agriculture, UAS, Dharwad (Karnataka)

A four year old non descript dog was presented to the Veterinary Hospital, UAS Dharwad, Karnataka with a history of dog fight a week back and escape of ingested food materials from the ventral abdomen since then. On clinical examination, animal had gastric fistula, was dehydrated, moribund and cachetic. Following fluid therapy the surgical correction of gastric fistula was taken up under Diazepam premedication and Propofol anesthesia in dorsal recumbence. The wound margins were thoroughly flushed with NS and the adhesions between the abdominal wall and the stomach were relieved. The gastric mucosa was trimmed and closed by double layer of inverted sutures (Cushing's) using chromic catgut no 2-0. The peritoneal cavity was lavaged with NS + Ceftriaxone and Tazobactum followed by Metronidazole. The abdomen wall defect was closed by closely placed simple interrupted sutures using Polypropelene no 1. Subcutaneous tissue and skin were closed routinely. The animal was maintained on parentral nutrition for five days along with a course of antibiotics and analgesics. The animal recovered uneventfully.

ORT-47: Successful Management of Hoof Avulsion in a Bullock with Wooden Hoof Block

A.S. Patil, Ramesh Rathod, B.N. Nagaraja, M.S. Vasanth and L. Ranganath
Veterinary Hospital, University of Agricultural Sciences, Dharwad (Karnataka)

An eight year old hallikar bullock was presented to the Veterinary Hospital, UAS Dharwad, Karnataka with a history of vehicular accident and profuse bleeding from left hoof area. On clinical examination, avulsion injury of lateral hoof of left hind limb resulting in severe hemorrhage was noticed. Treatment was taken up under Xylazine HCl premedication and intravenous regional anesthesia using 2% Lignocaine HCl. The avulsion wound exposing horn corium and profusely bleeding was initially dressed using botroclot powder and tinc benzoin pressure bandage. To prevent repeated injury to the horn corium because of contact with the ground, the hoof was elevated to a height of 1 ½

inches using wooden hoof block which was fixed to the healthy hoof using Araldite super glue. A course of antibiotics, NSAID's and stryptics were administered for five days. The wound dressing was performed once in 10 days with daily soaking the bandaged hoof with povidone iodine. After 20 days the bandage over the digit was moistened every day with a mixture of CuSO4, ZnSO4 and Formalin to make it harder. The animal recovered completely without any complications and was returned to field after four months following injury.

ORT-48: Development and Evaluation of Designer Locking Plate for Bovine Femur

Madhu, D.N., Aithal, H.P., Kinjavdekar, P., Amarpal, Pawde A.M., Dubey, P., Ahmad, R.A., Rohit Kumar and Sivanarayanan, T.B.
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The present study was undertaken to design and develop a contoured locking plate solely for the internal fixation of femur in large ruminants. The design of the plate was prepared using an epoxy mould and plates were then developed from 316L stainless steel by standard die technique. The design of the plate and its mechanical testing for stiffness, yield load, failure load, bending moment and maximum angular displacement were recorded/calculated for different plate-bone constructs shall be discussed during presentation. The values of compressive stiffness, yield load and ultimate failure load for DP-bone constructs were 85.5%, 96.4% and 83.3%, respectively, of intact bone, as compared to 72%, 87.5% and 72% for double plate bone constructs indicating that the designer plate provides better compressive strength to that of double plate fixation. The values of bending moment, bending stiffness, yield load and ultimate failure load for DP-bone group were 57.9%, 50%, 43.7% and 43.2% of intact bone, respectively, as compared to 43%, 43.5%, 34.38% and 33.3% for double plating, indicating that the designer plate for femur provides better strength than that of double plating against bending stress also. Similarly, under torsion, constructs with DP showed significantly higher mean values for ultimate failure load in comparison to double plating, suggesting that designer plate can provide greater rotational stability than single or double plate fixation. This indicates that the DP developed for bovine femur provides almost comparable strength to that of double plate fixation. Deformation and bending of implants was also less with DP-bone constructs subjected to testing indicating that the designer plate was the strongest. The DP was used successfully for the fixation of femur fracture in an adult buffalo.

ORT-49: Open Reduction and Internal Fixation Supplemented with Fluoroscopy for the Treatment of Humeral 'Y' Fracture in a Dog

T.N. Ganesh, A. Arun Prasad, R. Jayaprakash, Ninad Manjure and Shahid H.D.
Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai (T.N.)

A 7 year old male German shepherd dog was presented with history of a fall, leading to a non weight bearing lameness in the left forelimb. Radiography revealed a 'Y' fracture of the humerus condyle. The fracture was treated surgically by fixing an eight (8) hole 3.5 mm reconstruction plate, supplemented by a transcondylar lag screw and K-wire under fluoroscopic guidance. The dog started bearing weight intermittently 2 weeks after the surgery. Radiographs of the operated limb 3 weeks after the surgery revealed signs of callus. The range of motion of the elbow joint was reduced due to extensive callus formation periarticularly 6 weeks post operatively, without pain on palpation of the surgical site. Dog showed weight bearing lameness after 8 weeks of surgery. The dog was presented for follow up 7 months after surgery and had regained functional usage of the limb.

ORT-50: Development and Evaluation of Interlocking Nail for Bovine Femur

Madhu, D.N., Aithal, H.P., Kinjavdekar, P., Amarpal, Pawde A.M., Dubey, P., Ahmad, R.A., Rohit Kumar, Sivanarayanan, T.B. and Sarode, I.P.
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The present study was undertaken to design and develop interlocking nails (ILN), solid (SIN) and tubular

(TIN), specifically for femur of large ruminants, and evaluate them for fracture treatment in clinical cases. A detailed survey of cadaveric femur (adult buffaloes) and radiographs of cattle/buffalo femur was done to standardize the design and dimensions of nail adequate for fixation in bovine femur. The diameter and length of the nail found suitable were 16 mm and 240 mm, respectively, for an adult medium sized animal weighing 250-350 kg. The nails were then developed from 316L stainless steel. The bio-mechanical testing and its results shall be explained during presentation. This again suggest that solid interlocking nail construct though strongest, tubular interlocking nail is almost equally good in resisting bending stress. Similarly, under torsion, SIN and TIN constructs showed significantly higher mean values for ultimate failure load and ultimate failure displacement in comparison with pin-bone constructs. These results suggest that interlocking nail fixation provides greater stability against torsional force also.

ORT-51: Surgical Management of Femur Fracture in Dogs by Combining Internal and External Skeletal Fixation Technique

Sanjay J. Gaikwad and Milind Thorat
Department of Surgery & Radiology, PGIVAS, Akola (Maharastra)

Five clinical cases ageing 1-3 yrs old were examined ,which revealed femur fracture .Radiographs were taken wherever possible. After preparation, the dogs were operated under xylazine hydrochloride (2 mg/kg), ketamine hydrochloride (10 mg/ kg) and diazepam (0.5 mg/ kg) anesthesia. Retrograde intra-medullary pinning was done using Steinmann pin. After axial alignment and stabilizing the fracture, one k-wire was inserted through both the cortices of the distal fragment of bone, parallel to the body; horizontally from posterio-anterior aspect. Longitudinal Steinmann and horizontal k-wire exhibited the structure like inverted "T". Upper end of Steinmann pin and lateral ends of k-wire were attached to the specially designed inverted "U" external supporting device with the clamps. In case of multiple bone fragments, wiring was done to keep the fragments intact and in place. Long acting Benzathine penicillin 12 Lac units was administered for successive five days and injection meloxicam @ 0.3 mg/kg body weight administered for one day. Implants were kept in situ over 30-35 days and then removed. Our results showed that the combination of internal and external skeletal fixation is the most secure, safe, economical and successful surgical method.

ORT-52: Surgical Management of Tibio-Fibular Fracture by External Skeletal Fixation Technique in a Cat

Sanjay J. Gaikwad and Milind Thorat
Department of Surgery & Radiology, PGIVAS, Akola (Maharatra)

A tom-cat, having met with an accident, was brought to clinic after a week. After X-ray examination ,it was seen that there were fractures in the pelvic bone as well as in tibio- fibular bone. As there was pelvic fracture, plastering the affected limb was not advisable and hence was not advocated. The cat was prepared for treating tibio-fibular fracture using the external fixation technique. Xylazine 0.5 mg/kg and Ketamine 20mg/kg anesthesia was administered intra-muscularly. The tibio-fibular fractured bone fragments were stabilized by inserting two K-wires, in the epiphysis and one in the diaphysis in a posterio-anterior orientation. The pins were passed through both the cortices perpendicular to the length of the bone. These pins were connected to the external supporting rods with the help of Jess Clamps. Excess portion of pin-ends was cut off and the ends were curved suitably. Long acting antibiotics were given intramuscularly. Dressing with povidine was done at regular interval .After one week, the cat started supporting the operated limb. After 15 days, patient's walking got improved. After 20 days, it started bearing weight and even started running. The device was removed after 25th day. Thus, an eventful recovery was shown by the cat post operatively.

ORT-53: Titanium Elastic Nailing Andender Nailing for Repair of Long Bone Fracture in Dogs

Vaibhav Bisnoi, Meenakshi Dobhal, Ruby Dauthal, Mir Tufail Mohd., Arun Kumar, RashmiSaini, Manjul Kandpal, N.S. Jadon and Arup K. Das

College of Veterinary & Animal Sciences, Pantnagar (Uttarakhand)

The study was conducted in 12 clinical cases of dogs suffering with long bone fractures of the femur, tibia and radius/ulna. All 12 cases divided into two groups, Group A was treated with titanium elastic nailing and Group B was treated with Ender Nailing. All the dogs premedicated with atropine sulfate (0.045mg/kg, SC) and xylazine (0.5 mg/kg, IV), general anaesthesia was induced and maintained with propofol (4-6 mg/kg, IV). Anterio-posterior and medio-lateral radiographic views, at different intervals, were used for evaluation of long bone fracture and clinical parameter like cell blood count, alkaline phosphatase activity, average union time, time for attainment of normal gait, weight bearing capacity, posture of limb, angulation in limb. Ancillary parameter like operative time, intraoperative radiation exposure time, and cost of implants were used in the assessment of fracture fixation. On the basis of results of the present study it might be concluded that both the method of fracture fixation can be used for long bone fracture repair in dogs, especially in young or growing dogs, because they doesn't affect the growth plate.

WILD AND ZOO ANIMAL SURGERY

No. of Abstracts	:	**11**
No. of Lead Paper	:	**01**
Lead Paper Speaker	:	**Prof. D. M. Makhdoomi**
Chairman	:	**Prof. Vasanth M.S.**
Co-Chairman	:	**Prof. Ramani**
Rapporteur	:	**Dr. Khurshid Ahmad**

Wild 1: A Case of Surgical Management of Penetrating Wound in an Indian Python

Mohammed Arif Basha K., Manjunatha D.R. and Paramesh N. Huballi
Veterinary Hospital, Ranebennur (Karnataka)

An adult Indian Python (Python molurus) was found with a deep penetrating wound through its abdomen. Python had a deep penetrating wound due to piercing of spiral horns of the male Indian Black buck (Antelope cervicapra) through its stomach and skin. A putrefying slimy, foul smelling carcass of Black buck was found nearby without head portion. Python was sedated (ketamine @ 22.0 mg/kg, IM at sublumbar muscles). The horns of black buck were cut at its base and penetrating wound was closed aseptically in a routine manner leaving partially indigested skull into the stomach. Post operatively, flunixin meglumine (0.1 mg/kg, IM) and ceftriaxone (50.0 mg/kg, IM) were administered for 7 days. Regular wound dressing was done with antiseptics and the Python was kept captive for 15 days. The Python recovered uneventfully and was completely active, so it was released back into the forest.

Wild 2: Comparative Evaluation of Laparoscopic Tubectomy Followed by Endoclip Application versus Electrocautery in Bonnet Macaques (*Macaca radiata*)

Dilip Falgunan, Sooryadas S., Jacob Alexander, George Chandy, K.D. John Martin, Dinesh P. T. and Binoy C. Babu
Department of Veterinary Surgery, Veterinary College, Bidar (Karnataka)

The study was conducted on twelve adult captive-born female Bonnet Macaques; reared at the State Museum and Zoo, Thrissur; divided into two groups of six animals each-Group I (laparoscopic tubectomy by electrocautery) and Group II (laparoscopic tubectomy followed by endoclip application). All the animals were anaesthetized by xylazine-ketamine followed by butorphanol and midazolam injections. Laparoscopic tubectomy by electrocautery required two instrument ports, with a carbon dioxide flow rate of 2.0 L/minute. Coagulation of considerable length of fallopian tube was noticed in all animals of group I, suggesting that this technique can be adopted for permanent sterilization of pest species. Laparoscopic tubectomy followed by endoclip application required an additional 11.0 mm port for the introduction of endoclip applicator and carbon dioxide flow rate was maintained at 5.5 L/minute. Endoclip application guaranteed good haemostasis for tubectomy and inflicted minimum injury to the nearby tissue.

Wild 3: Some Unusual and Uncommon Observations in Wildlife Practice

D.M. Makhdoomi, M.D. Moin Ansari, Khursheed Ahmad, Shahid Hussian Dar, Mohsin Ali Gazi, Showkatul Nabi and Gazalla Siraj
Division of Veterinary Surgery and Radiology, SAUAST-K (J.&K.)

The present communication documents some uncommon observations recorded during surgical management/necropsy of leopards, bears, jungle cat (Felis chaus) and Himalayan Lynx. The individual's cases and their legal/clinical disposal shall be presented.

Wild 4: Management of Distal Metacarpal Fracture in a sub-adult Mouse Deer (*Moschiola indica*) using Acrylic Splint

Dilip Falgunan, George Chandy, Sooryadas S. and Meenuja M.S.
Veterinary Officer, Pilikula Biological Park, Vamanjoor, Mangalore (Karnataka)

A sub-adult female Mouse deer (Moschiola indica) weighing 2.43 Kg was presented with compound fracture of distal metacarpal bone at Zoo Hospital, Pilikula Biological Park, Mangalore. Reduction and reposition of the fractured bone was done under xylazine (1.0 mg/kg)-ketamine (10.0 mg/kg) anaesthesia and suturing of the wound

was accomplished by using absorbable suture materials (Vicryl 2-0). Acrylic splints were made by moulding dental acrylic (polymethylmethacrylate) according to the contour of the foot, following application of a thin cotton bandage. Acrylic splints were positioned and adhesive tapes were applied. Light weight, water proof acrylic splints were well tolerated by the animal and the animal showed early weight bearing.

Wild 5: Surgical Management of Certain Clinical Conditions in Wild Animals

R.V. Suresh Kumar, Thoiba Singh, P. Veena, S. Bharathi, V. Devi Prasad and Arun
Department of Veterinary Surgery, Sri Venkateswara Veterinary University, Tirupati (A.P.)

Clinical conditions necessitating surgical intervention are also common in wild animals. Different conditions (wounds at different locations, extensive injuries, abscessation, neoplastic growths, foot lesions, fractures of tail and limbs, oral lesions, lameness problems, extensive lacerations) in lions, leopard, wild sheep, chousingha, monkeys etc belonging to local zoological park are presented along with their clinical observations, diagnosis, treatment, post operative treatment and outcome.

Wild 6: Surgical Retrieval of Esophageal Fish Hook From an Indian Soft Shell Turtle (Nilssonia gangetica) Under Isoflurane Chamber Induction

A.K. Vala, A.I. Sama, P.V. Parikh, P.K. Rajput, K.M. Gohil, M.S. Bhatia, N.R. Amin and D.N. Kelawala
Department of Veterinary Surgery, Anand Agricultural University, Anand (Gujarat)

An Indian soft shell turtle (Nilssonia gangetica) weighing 500 gm was presented with a history of accidental ingestion of fish hook. Physical and clinical examination revealed nylon rope hanging out from the mouth. Radiography gave a definite clue about the position of fish hook and was successfully retrieved surgically through a ventro-lateral approach under isoflurane chamber induction.

Wild 7: Surgical Management of a Chronic Sinus in an Elephant "Rupkali" at National Tiger Reserve Park, Dudhwa, Uttar Pradesh

S. K. Maiti
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

A chronic 72 cm long sinus developed in between thoracic and lumber region just below the spine was reported in an elephant named "Rupkali" (female, 56 yr old, 3000 Kg) at Dudhwa National Tiger Reserve Park, Palia-kheeri, Uttar Pradesh. Animal was anaesthetised with xylazine (275.0 mg, I/V) and restrained ventrally. Surgical management included removal of necrotic tissue, drainage the pus, cleaning with hydrogen peroxide and povidone iodine and then filling the sinus tract with gauge soaked in antibiotic solution. The sedation was terminated by 2.5 ml (250.0 mg) of yohimbine hydrochloride administered in ear vein. Postoperatively, Amikacin (10.0 mg/kg, IV) was administered for 15 days after drug sensitivity test along with Meloxicam (100.0 ml). The wound was daily dressed with antibiotic ointment till it was completely healed.

Wild 8: Surgical Management of Compound Fracture of Metatarsal Bone in a Deer (*Gazella bennettii*)

M. Shandilya, G. Koli, J. Khurma, Ravendrasingh, S. Gharu and T.K. Gahlot
Department of Veterinary Surgery, RAJUVAS, Bikaner (Rajasthan)

A dear was presented with a history of compound fracture of metatarsal bone of right hindlimb. Clinical examination revealed the complete mid shaft fracture of right metatarsal bone. There was loss of sensation and coldness of lower region of the limb. Extensive necrosis of tissue with foul odour was observed at the fractured site.

The limb was amputated just above the right hock joint under local infiltration and ring block using lidocaine (6.0 mg/kg). The muscles were sutured in continuous suture pattern using chromic catgut no. 2 to cover the bony stump and skin was closed in horizontal mattress pattern using silk. Post-operatively, Ceftriaxone (500.0 mg, IV for 5 days) and Meloxicam (0.3 mg/kg, IM for 3 days) were administered. Regular antiseptic dressing was done for 10 days. Skin sutures were removed after 10 days. The recovery was uneventful.

Wild 9: Locking Compression Plate for the Management of Transverse Tibial Shaft Fracture in a Spotted Deer-A Case Report

Shiju Simon, M. P. Sankar, D. Visnuguruparan, P. Enbavalan, R. Ramprabhu and S. Prathaban
Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli (T.N.)

A two and a half year old female spotted deer weighing 27 Kg was presented with the history of automobile accident. Clinical examination confirmed fresh right open transverse tibial fracture. The animal was premedicated with xylazine (0.01 mg kg) and anaesthesia was induced and maintained with propofol (4.0 mg/kg). The surgical site was aseptically prepared and 8 holes 3.5 mm locking compression plate was applied on the tension surface of the bone. Muscle and skin were closed by 1-0 polyglycolic acid. Weight bearing was noticed on next post-operative day and the animal had an uneventful recovery.

Wild 10: Surgical Management of Bite Wound in Hanuman Langoor (*Simia entellus*)

Satbir Sharma, Sandeep Saharan, R.N. Chaudhary, Deepak Kumar Tiwari, Shrikant Sharma and Vijay Vikash
Department of Veterinary Surgery, COVS, LUVAS, Hisar (Haryana)

A hanuman langoor was presented with the history of wounds at the forehead and thigh region by another hanuman langoor during fighting. The wound was thoroughly washed with diluted povidone iodine. The forehead and thigh wounds were sutured in routine manner under general anaesthesia. Post bite anti rabies vaccine was prescribed at 0, 3, 7, 14 and 28 days. Systemic broad spectrum antibiotics and analgesics were administered parentally for five consecutive days. Skin sutures were removed on 12th post operative day. Animal showed uneventfully recovery on 16thpost operative day.

Wild 11: Different Types of Surgical Affections and their Management in Snakes vis-a-vis Snake Bite Treatment

Jayakrushna Das
College of Veterinary Science and Animal Husbandry, OUAT, Bhubaneswar (Orissa)

Different types of surgical affections and their management in snakes vis-a-vis snake bite treatment are discussed.

SMALL ANIMAL SURGERY

No. of Abstracts	:	31
No. of Lead Paper	:	01
Lead Paper Speaker	:	Dr. N.S. SAINI
Chairman	:	Prof. Ramesh Kumar
Co-Chairman	:	Prof. M.S. Badwal
Rapporteur	:	Dr. Arul Jyothin

SAS 1: A Rare Case of Dystocia in a Bitch due to Transverse Presentation of Single Puppy and C-Section Management

P. Thejasree, K. Manoj Kumar, M. Sai baba, N. Dhana Lakshmi, K. Sudarshan Reddy and D.Vijaya Kumari
Department of Veterinary Surgery, College of Veterinary Science, SVVU, Tirupati (A.P.)

A two year old advance pregnant Pomeranian weighing 8 kg was presented with history of straining and recumbent condition. Radiographic examination revealed the presence of single pup in transverse presentation causing dystocia and it was decided to perform C-section under general anaesthesia. On mid ventral abdominal approach through linea alba, uterus was exteriorized and overgrown dead foetus was removed. Inversion sutures were applied for closing uterus and abdomen was closed routinely.

SAS 2: An Unusual Case of Uretral and Cystic Calculi in a Dog

S. Dharmaceelan, A. Kumaresan, S. Senthilkumar and K. Jayakumar
Department of Veterinary Surgery, Veterinary College and Research Institute, Namakkal (T.N.)

A two year old, male Doberman, weighing 35 kg, was brought to the Teaching Veterinary Clinical Complex, Namakkal with the history of haematuria for the past four days. Examination revealed highly distended abdomen with mild respiratory distress. On laboratory examination the PCV and values were reduced but within the physiological limit. Radiological examination revealed numerous radio-opaque calculi present in the bladder and few calculi in the urethra behind the os penis. Emergency cystotomy was performed under general anaesthesia. Caudal midventral laparotomy was performed and the distended bladder was exteriorized. The cystotomy incision was performed and more than 100 cystic calculi were removed. By uroretrohydropropulsion the urethral stones were pushed into the bladder and removed. The bladder was flushed thoroughly with normal saline and closed with two rows of inversion suture using no 2-0 mersuture. The laparotomy wound was closed as per the standard procedure. The animal was maintained with antibiotics for one week and recovered uneventfully. The regular diet was restricted and renal diet was advised. The animal developed cystic calculi after 6 months. Plain radiograph revealed radio opaque calculi in the ureter and multiple cystic calculi noticed. The second cystotomy was performed. The uretral stone was removed carefully and sutured. The laparotomy wound was closed and the animal was maintained with antibiotics and other renal drugs. The animal made and uneventful recovery and is under observation.

SAS 3: Caesarean Section in Bitches: A Review of Thirty Cases

M.S. Dhakate, S. B. Akhare, B. M. Gahlod and S.V. Upadhye
TVCC, Nagpur Veterinary College, Nagpur (M.S.)

Caesarean sections were carried out in thirty bitches irrespective of breed. The etiology was recorded in all the cases. The surgery was performed under sedation with triflupromazineHcl, local infiltration and dissociative anasthesia. The uterine inertia was the predominant cause amongst the maternal causes, the other were deformed pelvic. The foetal cause was recorded in 30.00 % cases. Antero-posterior presentation of foetus was recorded in all cows. Ventrosacral position of foetus in 33.33% cows; whereas, dorsosacral position in 66.67% cows was recorded. Abnormal posture of the foetus was observed in 60% cases; whereas, normal posture of foetus was recorded in 40% cases. In 20 % cases cervix was fully dilated; whereas, in 80 % cases the cervix was partially or completely closed. Haematological parameters revealed significant changes in the haemoglobin, packed cell volume and platelet count. Significant changes were also recorded in blood glucose, serum potassium and SGPT.

SAS 4: Chemical and Microbiological Studies of Dental Tartar in Dogs

A.M. Patel, P.B. Patel, J.V. Vadalia, Vineet Kumar, S.H. Talekar and K.M. Solanki
Junagadh Agricultural University, Junagadh (Rajasthan)

Chemical and microbiological studies of dental tartar were performed in 1594 dogs presented to Teaching

Veterinary Clinical Complex, College of Veterinary Science and AH, Junagadh. Chemical analysis was carried out using *X-ray fluorescence* with XRF machine, which revealed presence of 27 elements. Among them calcium and phosphorus were predominant. A total 27 dental swabs were cultured on Brain Heart Infusion agar (BHA) between 24 and 48 hours. Cultured result revealed that *Staphylococcus Spp*. was predominant.

SAS 5: Evaluation of Oncolytic Viral Gene Construct and Chemotherapy with Nanosomal Paclitaxel for the Management of Canine Mammary Tumours

Divya Mohan, **S.K. Maiti,** Sangeetha P., Remya V., Abas R. Bhat, Deepika Bist, Naveen Kumar, A.K. Sharma, Nitin Bhatia and A. K. Tewari
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The cases of canine mammary tumour presented to referral veterinary polyclinic of Indian Veterinary Research Institute were grouped into three groups having 6 animals each. Group I, was subjected to surgical therapy. Group II, was given chemotherapy with nanosomal paclitaxel @150mg/32kg bwt on day 0, 21 and 32. Animals of group III were given oncolytic viral gene construct @100mg/animal intra-tumoral at weekly interval. The effect of various therapies was evaluated by regression in size, apoptosis study (FACS) and by gelatin zymography. Chemotherapy with nanosomal paclitaxel showed a good response to canine mammary tumour when compared to oncolytic gene construct therapy.

SAS 6: Hospital Occurrence of Canine Mammary Tumours

Divya Mohan, **S.K. Maiti,** Sangeetha P., Remya V., Naveen Kumar, A K. Sharma and Nitin Bhatia
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The present study was conducted in 18 clinical cases of client owned dogs presented at Institute's Referral Veterinary Polyclinic from September 2014 to May 2015 with a history of spontaneous mammary tumour. Out of 18 cases, a single case of mammary tumor was observed in male dog. Spitz was commonly affected breed and the tumour was most commonly observed in the age group of 10-12 years. Clinical staging done by TNM method revealed maximum animals in stage IV. Tumour biopsy and FNAC was performed. Occurrence of malignant tumours (83.33%) was more in comparison to benign forms (16.67%).

SAS 7: Removal of Thoracic Oesophageal Obstruction Through Gastrotomy Approach in a Dog

K. Kachwaha, G. Choudhary, Mahendra Tanwar, P. Bishnoi, S.K. Jhirwal, S.M. Qureshi and T.K. Gahlot
Department of Veterinary Surgery, Rajasthan University of Veterinary & Animal Sciences, Bikaner (Rajasthan)

A male bull dog aged 4 years was brought to TVCC, RAJUVAS with history of ingestion of rubber ball causing obstruction to the thoracic oesophagus. A lateral radiograph of thoracic region confirmed the diagnosis. An attempt to push the ball by a goat's stomach tube through the cardia into the stomach under the general anaesthesia was not successful. A gastrotomy operation was performed through left flank under general anaesthesia. The stomach tube was again passed into the oesophagus orally and ball was pushed up to the cardia. Vulsellum forceps was introduced into the cardia and ball was grasped between the jaws of forceps and removed. The gastrotomy and laparotomy wounds were closed in a routine manner. Dog was kept on fluid therapy for 5 days, followed by blend diet for 2 weeks. Post operatively dog was administered Inj Ceftriazone with tazobactum 562.50 mg bid for 7 days, Inj Paracetamol 100 mg im for 3 days, Inj Ranitidine 50 mg bid for 10 days. Skin sutures were removed on 10thpost operative days. Dog made an uneventful recovery and routine diet was given after 3 weeks of operation.

SAS 8: An Extensive Endometrial Hyperplasia in a Pomeranian Dog-A Case Report

Manjunath S.P., Nagaraju, N. and Manjunath D.R.
Veterinary Dispensary, Anathi, Hassan (Karnataka)

A 12 year old female Pomeranian dog presented to Rural veterinary dispensary, with a history of chronic anorexia, weakness, intermittent pyrexia and vomition for a period of 1 month. Physical examination revealed nodular palpable lesions in abdomen, vaginal mucus membrane was pink, moist no history of fowl smelling pus discharge. Physiological parameters were in normal range. Blood examination revealed marginal neutrophilia, leukocytosis. It was decided to go for exploratory laparotomy. Under 2.5% thiopentone general anesthesia with xylazine as preanaesthetic ovariohysrecectomy was done. Linea alba was sutured with No.1 polyglycolic acid and skin with polyamide 1-0 suture material. Dog was given a course of antibiotic. Both uterine horns were nodular, thick with rough mucosal surface with pockets of pus. Histopathology of the nodular mass revealed endometrial hyperplasia.

SAS 9: Colonic Obstruction and Surgical Management in Dogs: A Review of 6 Cases

R. Sivashankar, **N. Krishnaveni,** M.S. SabarishBabu Ravi Sundar George, L. Nagarajan, Mohammed Shafiuzama, Mala Shammi and Jayaprakash, R.
Department of Veterinary Surgery, Madras Veterinary College, Chennai (T.N.)

Six dogs presented to the Madras Veterinary College Teaching Hospital with the history of constipation, straining and anorexia were included in this study. Routine clinical examination was done on these animals. Radiological examination revealed faecal impaction on colonic area. The pre-surgical haematological findings suggested hemoconcentration. Anaesthetic protocol was selected on case to case basis for surgical intervention. Colotomy, colopexy and typhylectomy (4 colotomy, 1 colopexy and 1 typhelectomy) were performed. Postoperative care with antibiotics & analgesics and fluid therapy was done. None of the cases showed postoperative complications. All the six dogs had uneventful recovery.

SAS 10: Comparison of Laparoscopic and Right Flank Ovariohysterectomy in Dogs

Vasudev, S.P., **DilipKumar, D.,** Shivaprakash, B.V. and Ashok Pawar
Department of Veterinary Surgery and Radiology, Veterinary College, KVAFSU, Bidar (Karnataka)

The study was conducted in 12 intact female dogs presented for elective ovariohysterectomy at the Department of Surgery and Radiology, Veterinary College, Bidar. They were randomly divided into two groups *viz.,* Group-I and Group-II consisting of six animals in each group. Group-I animals underwent right flank and Group-II, laparoscopic ovariohysterctomy. Anaesthetic regimen of atropine sulphate (0.045 mg/kg, I/M), xylazine hydrochloride (1 mg/kg I/M) and propofol (4 mg/kg I/V for induction and 0.4mg/min/kg I/V infusion for maintenance) was given for both the groups of animals. Surgical techniques were compared for clinico-physiological and haemato-biochemical parameters. Surgical duration was significantly higher for laparoscopic technique than that for right flank approach of ovariohysterectomy. Pain scores were significantly lesser in Group-II than in Group-I animals. There were minor intra-operative complications *viz.,* bleeding form ovarian pedicles, splenic tap by Verres needle and accidental tissue perforation in Group-II surgery. There was an increase in total leucocyte count in the immediate post-operative interval for both the groups. Neutrophilia with relative lymphocytopenia was recorded in both groups immediately after surgery. The neutrophil-lymphocyte ratio was increased in both the groups at immediate post-operative period. Biochemical parameters *viz.,* alanine transaminase, aspartate transaminase, serum urea nitrogen and creatinine were within normal physiological limits throughout the study. The anaesthetic protocol was adequate to perform both the techniques with little modifications at times. Comparison between suture materials in laparotomy wound revealed that polyglecaprone-25 was less tissue reactive than chromic catgut.

SAS 11: Cervical Esophagotomy for the Retrieval of Distal Esophageal Foreign Body in a Dog

S. Ravikumar, B.N. Nagaraja, L. Ranganath and V. Mahesh
Department of Veterinary Surgery, Veterinary College, KVAFSU, Bangalore (Karnataka)

Four month old non descript dog was presented with history of dysphagia, regurgitation, retching, inappetence, restlessness, depression, and dehydration. Physical examination revealed cervical pain. Lateral cervical radiography revealed entrapment of bony vertebra in distal cervical esophagus. Since the bony vertebra was having sharp edges it was removed by cervical esophagotomy. Esophageal wound was closed in inversion suturing pattern (cushing) for esophageal mucosa and simple continuous pattern for muscular layer using polydiaxonone No 4-0. Postoperatively animal was maintained with intravenous fluids for three days. Dog was followed up to for a period of six months. No postoperative complications were encountered.

SAS 12: Congenital Peritoneal-Pericardial Diaphragmatic Hernia in a German Shepherded Puppy-A Case Report

P. Sankar, R.V. Suresh Kumar, N. Dhanalakshmi and P. Veena
Department of Veterinary Surgery, Sri Venkateswara Veterinary University, Tirupati (A.P.)

A thirty day old German Shepherded puppy was referred to the college of Veterinary Science, Sri Venkateswara veterinary University, Tirupati (AP) with the history of anorexia, tachypnea. Cardiac auscultation revealed muffled heart sound. Lateral and ventro-dorsal radiography revealed enlarged cardiac silhouette and displacement of liver lobe in the thoracic cavity. The case was diagnosed as peritoneal-pericardial diaphragmatic hernia. Surgical intervention was made to correct the diaphragmatic defect. The animal was recovered on 10 the post operative day.

SAS 13: Correction of Sialocele in a German Shepherd Dog

Rukmani, M.O. Kalim, S.K. Tiwari, R. Sharda, S. Singh, N. Gopal and A.S. Sengar
Department of Veterinary Surgery, College of Veterinary Science & A.H., Anjora, Durg (C.G.)

A four years old German shepherd dog was brought to the Department of Veterinary Surgery and Radiology with complaint of swelling under the rear portion of the jaw. On clinical examination soft, non-painful swelling under the lower jaw was observed and no swelling was seen under the tongue or in the back of the mouth. The swelling was soft and feel like fluid within a pocket of tissue. On fine-needle aspiration revealed presence of clear or slightly yellow and thick saliva. General anaesthesia was achieved using Atropine sulphate- 0.02 mg /kg i/m, Xylazine- 1mg/kg i/m and Ketamine- 5 mg/kg i/v and complete drainage of the sialocele was done. After flushing with normal saline, cauterization with $KMnO_4$ was done. Then suturing was done with silk using simple interrupted sutures. Postoperative care was done by using Intacef (500mg), Meloxicum (2ml) along with antiseptic dressing with betadine solution and sliversulfadiazine ointment for 5 days. Suture was removed after 7 days. No recurrence was reported up to 2 months of post surgery.

SAS 14: Effect of Stem Cells in Femoral Fracture Healing in Dogs

Ramesh Rathod and M.S. Vasanth
Department of Veterinary Surgery, Veterinary College, Bangalore, KVAFSU (Karnataka)

Cases presented to Veterinary College Hospital, Bangalore with femur fracture were subjected to conventional intramedullary pin fixation for fracture stabilization and autogenous stem cells were deposited at the fracture. Stem cell isolation was done using 60 ml Bone marrow aspirate concentrate implant kit from iliac crest using heparin anticoagulant. Excess plasma was removed and stem cells were deposited at fracture site after intramedullary pinning. The animals were able to bear weight on third postoperative day and on 60th postoperative day minimum visibility of

endosteal and periosteal callus at the fracture site was noticed on the radiograph. On 7th postoperative day distal migration of pin was noticed in one dog but excellent healing of the fracture was noticed in rest of the dogs. These studies show encouraging results to enable us to harness and augment under controlled conditions, the body's own regenerative potential. In this study we deposited bone marrow stem cells without any scaffolds directly at fracture site and there was better healing without any post operative complication. Stem cells and other progenitor cells present in bone marrow concentrate might help healing of fracture in the present study.

SAS 15: Enterolith and its Surgical Management in a Labrador

Harish Kulkarni, Shivamurthy Wakare, Shivanand Magadum, Bhoyar, R. and Vivek Kasaralikar
Veterinary Clinical Complex, Veterinary College, KVAFSU, Bidar (Karnataka)

A 14 month old, male, Labrador dog was presented to Teaching Veterinary Clinical Complex (City Hospital), APMC Yard, Gandhi Gunj, Bidar with a history of projectile vomiting and anorexia and unable to pass faeces for 3 days, which did not respond to the routine medical treatment by local veterinarian. On clinical examination, all the physiological parameters were within the normal range. On abdominal palpation a hard mass was felt near the anterior portion of the abdomen. Radiographic examination revealed round smooth edged radiopaque foreign body in the anterior portion of small intestine. Laparotomy was performed and stone was removed from the jejunum by performing enterotomy. The enterotomy incision was closed using polyglycolic acid 2-0 by simple interrupted pattern and omentopexy was performed. Laporatomy incision was closed as per the standard procedure. Postoperatively fluid therapy for 5 days, broad spectrum antibiotic for 7 days and analgesic for 3 days were administered with alternate day wound dressing. Initially pet was kept off feed for 72 hours followed by water and liquid diets. Pet started passing black coloured faeces (melena) after two days of surgery without vomiting. Animal recovered uneventfully without complications.

SAS 16: Extensive Leiomyoma in a Lhasa Apso Bitch

M.O. Kalim, Rukmani, S.K. Tiwari, R. Sharda, S. Singh, N. Gopal and A.S. Sengar
Department of Veterinary Surgery, College of Veterinary Science & A.H., Anjora, Durg (C.G.)

An 8 year old Lhasa Apso bitch was brought to the Department of Veterinary Surgery and Radiology with complaint of abnormal fleshy mass occupying vulvar opening for last 1 month. Clinical examination revealed a round smooth, fleshy mass like tumour occupying vulvar opening, which protruded through the vagina without any vaginal prolapse. Appetite and other vital parameters were normal. After general anaesthesia using Atropine sulphate- 0.02 mg /kg i/m, Xylazine- 1mg/kg i/m and Ketamine- 5 mg/kg i/v, episiotomy was performed for surgical excision of the mass. The growth was carefully separated from vaginal wall by putting elliptical incision at the base of the mass. Episiotomy incision was sutured in two rows by continuous suture pattern followed by vaginal wall defect closed with continuous suture. The weight of multiple mass was 560g. Postoperative care was done by using Intacef (500mg), Meloxicam (2ml) along with antiseptic dressing with betadine solution and sliver sulfadiazine ointment for 5 days. No recurrence was reported up to 6 months of post surgery.

SAS 17: Gastric Adenocarcinoma in a Dog-A Case Report

Mohamed Shafiuzama, M.S. Sabarish Babu, S. Dinesh Kumar, Mala Shammi and T.N. Ganesh
Department of Veterinary Surgery, Madras Veterinary College, TANUVAS,Chennai (T.N.)

An 11 year old male non-descript dog was presented with the history of frequent vomition and progressive weight loss for the past one month. The dog was dull, dehydrated, anaemic and emaciated. Heart rate and respiratory rate were within the normal limit. Haematology and serum biochemical profiles revealed, reduction in total red blood cell count and haemoglobin with neutrophilia and leucocytosis. Plain radiography of the thorax lateral view revealed early metastatic lesion but abdomen lateral view revealed no abnormalities. Positive contrast radiography revealed

delayed gastrointestinal transit time and absence of foreign body. Ultrasonography revealed a prostatic cyst of about 3.04 mm diameter and thickening of the stomach wall and pylorus was noticed. Hence exploratory laparotomy was performed to find out the cause of chronic vomition, which revealed thickening of entire layer of the gastric wall including pylorus and the sample was collected for histopathology which revealed gastric adenocarcinoma. Since the tumor was spread to the full thickness of the stomach wall including pylorus, the prognosis was informed to the owner and euthanasia was advised.

SAS 18: Intestinal Obstruction in Dogs-A Review of Five Cases

Shiju Simon, M., Chhavi Gupta, P. Sankar, R. Ramprabhu and S. Prathaban
Department of Veterinary Surgery, Veterinary College and Research Institute, Tirunelveli (T.N.)

Four male puppies (two Labrador, a Spitz and Rottweiler) aged between five to eight months and an eight year old Dachshund were presented with the history of vomiting, lethargy, depression and passing bloody mucoid stool (in one case). In another case owner saw that the puppy had swallowed a toy while playing. Physical examination revealed normal capillary refilling time, temperature, heart and respiration rates. Abdominal palpation in three cases revealed a mass at the cranial abdomen, suggestive of intestinal obstruction. Plain abdominal lateral radiography revealed radiolucent mass at the cranial abdomen. A mid-ventral celiotomy was performed and the sites of obstructions were at the level of distal duodenum and proximal jejunum. Through enterotomy the foreign bodies were removed. All animal had an uneventful recovery.

SAS 19: Ipsilateral Pyometra with Concurrent Subcapsular Spleenic Abscess/Torsion in a Great Dane

Harish Kulkarni, Shivanand Magadum, Bhoyar, R., Shashidhar Ballari and Vivek Kasaralikar
Department of Veterinary Surgery, Veterinary College, KVAFSU, Bidar (Karnataka)

A 4 year old, female, Great Dane dog presented to Teaching Veterinary Clinical Complex (City Hospital), APMC Yard, Gandhi Gunj, Bidar in recumbent manner with a history of vomiting, anorexia and not responding to the routine treatment. The pet was mated 35 days back. On clinical examination, rectal temperature was 96.2°F, heart rate was 58 beats per minute, CRT >2seconds with severely congested mucous membrane suggestive of septicaemia and toxaemic condition with hypovolumic shock. On auscultation cardiac murmurs were noticed. Haematological study revealed leucocytosis with severe neutrophilia (90%). On ultrasound examination of abdomen, right horn was pregnant (30 days) and left horn was distended with hyperechoic granular mass confirming ipsilateral pyometra with pregnancy. On the anterior aspect of uterine horn both hypo and hyperechoic fluid filled cavity was noticed in which spleen was free floating, suspecting for subcapsular splenic abscess. Since the animal was hypothermic and toxaemic condition, to stabilize the animal fluid therapy and broad spectrum antibiotics were administered. Later the animal was subjected to ovariohysterectomy and splenectomy, but animal was unable to sustain surgical anaesthesia and collapsed after ovariohysterectomy. Post mortem examination revealed subcapsular splenic abscess with torsion of splenic vessels near the hilus. Pus samples were collected and submitted for isolation and identification, which revealed *E.coli* in both uterine and splenic abscess confirming concurrent occurrence of ipsilateral pyometra with subcapsular spleenic abscess.

SAS 20: Large Testicular Tumour in a German Shephard Dog

Devesh Kumar Giri, **Deepak Kumar Kashyap** and Govina Dewangan
Department of Veterinary Surgery, Arawali Veterinary College, Bajor, Sikar (Rajasthan)

A 4 years old male German shephard was brought to the Department of Veterinary Surgery and Radiology, Arawali Veterinary College, Sikar, Rajasthan with a history of a huge swelling in the inguinal region. Clinical examination revealed a large broad based mass occupying a large area on the inguinal region. On palpation the

consistency of the mass was hard and nonfluctuating. Exploratoy puncture revealed blood mixed fluid. Radiograph was taken to know the extension of the bulged mass. Routine physiological parameters were within the normal range. After preliminary stabilization, the dog was aseptically operated under Atropine sulphate and Xylazine premedication followed by Ketamine HCl general anaesthesia. Lumpectomy was done and entire tumorous mass along with some healthy tissue was removed from the site. The mass weighed 335 g. Histopathologically the mass was confirmed as a sertoli cell tumour. Postoperatively, Inj. Ceftriaxone was administered @ 20 mg/kg and Inj. Melonex @ 0.2 mg/kg body weight intramuscularly along with fluid therapy for 5 days. The wound was dressed with silver sulphadiazine ointment for 7 days. The wound healed satisfactorily and the dog recovered in 12 days.

SAS 21: Monorchidism in a German Shephard-A Case Report

Ramanathan, S., **Harish Kulkarni** and Rani
Department of Veterinary Surgery, Veterinary College, KVAFSU, Bidar (Karnataka)

A ten year old, male, German shepherd dog presented to the private clinic with a history of abdominal pain, dysuria and anorexia for seven days. On clinical examination, pet was dull and weak with dribbling of urine noticed. On abdominal palpation, a hard mass was palpable at the caudal aspect. Abdominal radiography revealed intra abdominal mass just caudo-ventral to kidneys, prostate enlargement and no abnormalities were detected in the bladder. The case was tentatively diagnosed as tumor originating from kidneys. On ultrasonographical examination revealed large mass involving testicular tissue. The scrotum was checked for the testicles. Absence of right testicle with normally descended left testicle was evident. The case was diagnosed as unilateral (right testis) cryptorchidism with testicular tumor. Surgical excision of the retained intra abdominal testicle was planned. Haemato- biochemical parameters were within the normal range except increased serum BUN and creatinine levels.

SAS 22: Prostatic Omentalization for the Treatment of Chronic Prostatic Abscess in a Great Dane Dog

V. Mahesh, S. Ravikumar and L. Ranganath
Department of Veterinary Surgery, Veterinary College, KVAFSU, Bangalore (Karnataka)

A six-year-old male Great Dane dog weighing about 60kg was presented with the history of pyuria and dysuria. Haematology revealed marked leucocytosis with neutrophilia. Lateral survey radiograph of caudal abdomen revealed radiodense mass at the neck of the urinary bladder. Abdominal ultrasonography revealed hypoechoic lesions surrounded by hyperechoic capsule. Heterogenously echoic fluid suggestive of necrotic debris within the capsule. Upon celiotomy, oval masses were noticed at either side of the neck of the urinary bladder and fine needle aspiration revealed pus. Pus was drained out, prostatic cavity was washed with warm saline and prostatic omentalization was performed. Urine culture was performed on 5th postoperative day which showed presence of white blood cells and staphylococci in urine and it was repeated at three days after discontinuing of antibiotics i.e., at 25th day which revealed very few white blood cells. Skin sutures were removed on 10th post-operative day. Follow up was done up to six months during which animal did not show any signs of systemic illness or urinary incontinence.

SAS 23: Single Layer Suturing Technique for Bladder Wall Repair in Dogs

Prachi E. Taksande, **N.S. Saini,** Tarunbir Singh, Ashwani Kumar, ArunAnand and PallaviVerma
Department of Veterinary Surgery, GADVASU, Ludhiana (Punjab)

The study was conducted on 24 dogs suffering from obstructive urolithiasis to evaluate the single layer suturing techniques for bladder wall repair after cystotomy. The animals were divided into two groups; in Group I (n=12), single layer continuous appositional suture pattern and in Group II (n=12), single layer cushing inversion suture pattern was used for urinary bladder wall repair during cystotomy. Diagnosis was made on the basis of history, clinical findings, urinalysis, radiography and ultrasonography. Majority of animals had multiple cystoliths in both groups.

Cystotomy was performed under general anaesthesia to retrieve cystoliths present inside the urinary bladder. Distention of urinary bladder with normal saline solution through urethral catheter was helpful in checking any leakage in the repaired urinary bladder. Pneumocystography was helpful in evaluating the urinary bladder wall healing post-operatively in all the cases without any complications after surgery. It was concluded that Single layer appositional and inversion suturing techniques were found to be satisfactory for the repair of bladder wall in canine.

SAS 24: Successful Surgical Management of Cystoliths in a German Shepherd Dog

Raju Sharda, M.O. Kalim, Rukmani Dewangan, N. Gopal and S. Netty
Department of Veterinary Surgery, College of Veterinary Science & A.H., Anjora, Durg (C.G.)

A six year old male GS dog was brought to the Department of Veterinary Surgery and Radiology with complaint of stranguria, straining to urinate, occasional hematuria, dribbling of blood tinged urine from the prepuce since last 1 year. On retrograde hydropulsion flushing, there was normal urethral patency. Radiographic examination revealed presence of numerous radiodense multiple calculi in urinary bladder. Cystotomy was performed under general ansesthesia using atropine sulphate- 0.02 mg/kg i/m, xylazine- 1mg/kg i/m and propofol- 4mg/kg i/v. Laparotomy incision was given just lateral to prepuce. On exteriorization, bladder showed multiple black coloured calculi which were removed. Then urinary bladder was sutured by using double row of Lambert sutures and abdominal incision closed in the usual manner. Routine post-operative care was done for 5 days using DNS 200 ml i/v Ceftriaxone (500mg) i/v, Meloxicam (2ml) i/m along with antiseptic dressing with betadine solution and sliver sulfadiazine ointment. Cystone tablets were given @ 2 tab daily for 30 days. The dog showed uneventful recovery in a period of 6 months.

SAS 25: Surgical Excision of Ventral Abdominal Lipoma in a Dog- A Case Report

M. Tanwar, J. Khurma, Ravendrasingh, M. Shandilya and T.K. Gahlot
Department of Veterinary Surgery, RAJUVAS, Bikaner (Rajasthan)

A dog aged 7 years was presented to TVCC, CVAS, Bikaner with a history of a spherical soft-elastic mass palpated at abdomen ventrally. The fine needle aspiration of the mass revealed lipoma and surgical excision was advised. The surgical site was prepared aseptically and tumor was removed under general anesthesia using xylazine HCl (1 mg/kg b. wt. IM) and ketamine HCl (10 mg/kg b. wt. IM). The mass was excised and skin was sutured by interrupted suture pattern using silk. Post-operatively broad spectrum antibiotic IntacefTazo (562.5 mg for 5days), non-steroid anti-inflammatory drug Meloxicam (0.2 mg/kg i/m for 3 days) and multivitamin Tribivet (2 ml i/m for 3 days) were administered. Sutures were removed on 10th post-operative day and uneventful recovery was observed.

SAS 26: Surgical Management of Perineal Hernia with Cystopexy in Male Dog

Basanta Saikia
Department of Veterinary Surgery, Central Agricultural University, Selesish, Aizawl (Mizoram)

An eleven year old male German shepherd dog was brought to the Department of Surgery and Radiology with the history of weakness, loss of appetite, constipation, anuria and a fluctuating swelling on the left ventrolateral part of the perineal region. Urethral catheterization for evacuation of bladder confirmed that the hernial content was urinary bladder. Reconstruction of pelvic diaphragm was done by apposing levator ani, coccygeus muscle and external anal sphincter using black braided silk. For that surgical procedure the animal was controlled in ventro-dorsal recumbency with hind quarter elevation. Then cystopexy was performed through midline incision with the animal in dorso-ventral recumbency and the urinary bladder was replaced into the abdominal cavity. The recovery was uneventful.

SAS 27: The Canine Transmissible Venereal Tumor: A Review of 15 Cases

Ratanlal Soni
SGDM Pet-Animal Welfare Clinic & Research Center and Government Veterinary Polyclinic, Sikar (Rajasthan)

Among total 15 adult dogs, 5 males and 10 females suffering from venereal granuloma were treated with vincristine sulphate 0.025mg/kg body weight I/V. Three injections of vincristine sulphate were given by slow I/V route at weekly intervals and among these 2 males 6 females were treated with cryo-surgery, 3 males and 4 females were treated with routine surgery. In most of the cases bleeding was stopped immediately after cryo-surgery and first injection. Cryo-surgery and use of Inj.Vincristine Sulphate are very effective instead of routine surgery. During the treatment no side effect of vincristine was recorded.

SAS 28: Surgical Management of Intestinal Obstruction Due to Bristles of Sweep Broom in a Queen Cat

Talekar S.H., Joice P. Joseph, Vineet Kumar, Patel A.M., Vadalia J.V. and Sindhal D.L.
Department of Veterinary Surgery, College of Veterinary Science & A.H., JAU, Junagadh (Rajasthan)

A two years queen cat was presented to Teaching Veterinary Clinical Complex (TVCC), Junagadh Veterinary College with history of complete anorexia and vomiting for last two days. On abdominal palpation hard mass was palpated. Clinical study reveals with normal heart rate, respiratory rate and temperature and haematobiochemical examination reveals normal DLC, LFT & KFT. USG abdomen reveals hard mass in abdominal region. Surgical removal of broom bristle ball from intestine was done under ketamine and diazepam mixture anaesthesia, after premedication with atropine sulphate. Postoperatively I/V DNS, RL for rehydration, ceftriaxone antibiotic for five days and melonex as a pain killer for two days were used. Water intake was withheld for two days and food for five days. Cat showed uneventful recovery after surgery with normal food and water intake.

SAS 29: Surgical Treatment of Mammary Gland Tumour in Ten Years Old Male Pomeranian Spitz

Talekar S.H., Vineet Kumar, Patel A.M., Vadalia J.V., Padheriya H.M., Khunt P.H., Vaghela D.V., Solankhi K.P. and Sindhal D.L.
Department of Veterinary Surgery, College of Veterinary Science & A.H., JAU, Junagadh (Rajasthan)

A Ten years old male Pomeranian spitz dog was presented to Teaching Veterinary Clinical Complex (TVCC), Junagadh Veterinary College with presence of ruptured hard tumour mass right cranial to penis. Physical examination confirmed mammary gland tumour involving right inguinal mammary gland. Clinical study revealed with normal heart rate, respiration rate and temperature and haematological examination reveals neutrophilia, lymphocytosis. Liver and kidney function tests were normal. Surgical excision of mammary gland tumour was done under ketamine and diazepam mixture anaesthesia as an induction and isoflurane gas anaesthesia for maintenance. Postoperatively ceftriaxone for seven days and melonex as a pain killer for three days were used. The dog showed uneventful recovery. Dog did not show recurrence of tumour up to 6 months.

SAS 30: Lipoma in a Female Spitz Dog

Santhi Jayalekshmi S.R., Sarit Kumar Patra, Abas Rahid Bhat, Rashmi, Deepesh Kumar Gautam
Division of Surgery, IVRI, Izatnagar, Bareilly (U.P.)

A 5 year female spitz dog was presented with a complaint of soft swelling on lateral aspect of fetlock region. Owner reported that initially mass was small in size and gradually increased within a period of 2 months. Aspiration biopsy revealed presence of fat cells. The case was tentatively diagnosed as lipoma and advised for surgical intervention. Animal was anaesthetised under general anaesthesia. The surgical site was prepared in routine manner. An elliptical incision was given at base of swelling and mass was separated from skin by blunt dissection. After

subcutaneous suturing, the extra portion of skin was exised and skin was closed by horizontal mattress sutures using silk. Postoperatively, ceftriaxone @ 20 mg/kg b.wt was given for 7 days and meloxicam @0.5 mg/kg for 3days parenterally. Wound was regularly dressed with antiseptic solutions. On 12th day post-operative day, skin sutures were removed and animal recovered uneventfully.

SAS 31: Use of Skin Flaps to Cover Skin Defects Following Tumour Excisions with wide Margins in Dogs-A Review of Six Cases

Mala Shammi, N.J.D'Souza, M.S. Sabarish Babu and L. Nagarajan
Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai (T.N.)

The study was conducted to revi7ew and thus advocate the advantages of skin flaps to reconstruct large skin defects following excision of tumours in dogs. Tumours included were 3 mammary adenocarcinomas, 2 mast cell tumours and 1 squamous cell carcinoma. All tumours were excised with wide margins of 2cm. The defects created after resection ranged from 8.42 to 158cm^2. Flaps used to reconstruct the defects included H plastys, Single pedicle advancement flaps and Flank and Axillary fold flaps. When executed properly skin flaps allow for rapid reconstruction with an adequate blood supply and a functional skin with color and texture to match without the associated skin tension as seen in conventional closure.

RUMINANT SURGERY

No. of Abstracts	**:**	**31**
No. of Lead Paper	**:**	**01**
Lead Paper Speaker	**:**	**Prof. N.S. Saini**
Chairman	**:**	**Dr. Jit Singh**
Co-Chairman	**:**	**Dr. M.S. Dhakate**
Rapporteur	**:**	**Prof. Milind Thorat**

RS 1: A Clinical Study on Surgical Affections of Third Eye Lid in Working Bullocks

Akshay Mohan, N. Aruljothi and T.P. Balagopalan
Department of Veterinary Surgery and Radiology
Rajiv Gandhi Institute of Veterinary Education and Research, Puducherry (Pondicherry)

The clinical study on surgical affections of third eyelid was conducted in 24 Hallikar cross bred working bullocks aged 6-12 years presented at TVCC for a period of 4 months. The animals were reported to be working for 5-11 hours per day exposing to sun light on an average of 2-6 hours during summer season. The width and length of the third eyelids ranged from 1.5-3.2 cm and 1.8-2.8 cm, respectively. Pigmentation was found in 35 third eyelids whereas others were non-pigmented. The pigmented eyelids did not reveal any abnormal lesions. However, non-pigmented eyelids revealed congestion (2), proliferative lesions (2), nodular growth (2) and squamous cell carcinoma (3). Schirmer I tear test values ranged from 12-35 mm/mts. The symptoms shown by these animals may be attributed to hazardous UV radiation since the UV Index in and around Pondicherry is 9 to 11+ during summer.

RS 2: Surgical Management of a Large Abscess Leading to Lameness in a Bull: A Case Report

A.R. Ninu, P. Shankar, D. Vishnugurubaran, S. Kokila**,** M. Shiju Simon and R. Ram Prabhu
Department of Veterinary Surgery and Radiology,Veterinary College and Research Institute, Tirunelveli (T.N.)

A bull was presented to Teaching Veterinary Clinical Complex with a large swelling in the base of neck near the left shoulder joint interfering with limb movement. Fine needle aspiration revealed pus which was submitted for culture and antibiotic sensitivity test. The animal was restrained in standing position to incise and drain the abscess. A blunt incision of 1 ½ inch depth could not incise the encapsulated abscess and hence the animal was restrained in lateral recumbency. An 18 gauge needle was inserted into the capsulated cavity to assess the depth. A further 1 ½ inch deep incision was needed to incise the abscess covering to drain around 3 litres of semisolid pus. Case was unique in the sense that restraining in lateral recumbency was needed to completely incise the abscess capsule and its unusual size affecting the animal's progression. Routine antibiotic and analgesic therapy along with packing of the cavity with tincture iodine instilled gauze was advised.

RS 3: Caesarian Section in Bovines under Epidural Analgesia using Different Combination of Drugs

Manjunatha, D.R., Nagaraju, N., Basavara Balappanavar, Srinivasmurthy, K.M. and Vasanth M.S.
Department of Veterinary Surgery and Radiology, Veterinary College, Hassan (Karnataka)

Eighteen cows in and around the Hassan were presented to Teaching Veterinary Clinical Complex, Hospital, with the history of dystocia which could not be relieved by local Veterinarian. Per rectal examination in all the cases revealed severe edema due to traction, death and emphysema of foetuses in 12 cases, narrowing of pelvic cavity and incomplete dilatation of cervix in 6 and schistosoma refluxes in 2 cases. Cesarean section was performed in all the 18 animals. The animals were randomly divided into three groups, 6 each, based on anesthesia. Caesarian section was performed following local infiltration of Lignocaine Hydrochloride in Group-I animals; whereas epidural Lignocaine Hydrochloride @ 4-6 ml depending upon body weight and local infiltration of Lignocaine Hydrochloride was given to Group-II animals; and epidural Xylazine Hydrochloride 0.05mg/kg body weight with Lignocaine Hydrochloride about 4-6 ml depending upon body weight and local infiltration of Lignocaine Hydrochloride was given to Group-III animals. Among these combinations of epidural, Xylazine Hydrochloride with Lignocaine Hydrochloride and local infiltration of Lignocaine Hydrochloride gave satisfactory anesthetic effect for a comparatively longer period with good muscle relaxation and may be recommended for caesarian section in large ruminants.

RS 4: Clinical and Hematobiochemical Findings of Obstructive Urolithiasis in Male Buffalo Calves (*Bubalus bubalis*): A Study on 40 Clinical Cases

J.S. Khosa, Diler Singh, S. Gharu and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science

Rajasthan University of Veterinary and Animal Sciences, Bikaner (Rajasthan)

The study was conducted on 40 clinical cases of urine retention in calves of less than 1 year age. History of cases regarding age and sex of the animal, duration of illness, feeding pattern etc. was recorded. The diagnosis was confirmed on the basis of clinical examination, abdominocentesis, and laparotomy as per the case. The total leucocyte counts were within normal limits whereas the differential neutrophil and lymphocyte counts were higher than reference values. The blood urea nitrogen and creatinine values were higher than the normal range. Maximum incidence of the urolithiasis was observed in winter months. It was concluded that effective treatment of obstructive urolithiasis depends on early assessment of the case regarding intactness or rupture of urethra and/or bladder; and degree of uremia with associated dehydration . Tube cystostomy was found to be most efficient method.

RS 5: Clinical Studies on Foreign Body Syndrome in Bovines

P.K. Rajput, P.V. Parikh, D.B. Patil, T.A. Mehta, M.S. Bhatia, A.J. Pal and A.K. Vala
Department of Veterinary Surgery and Radiology, Veterinary College, AAU, Anand (Gujarat)

A clinical study on foreign body syndrome in bovines was carried out in 20 animals (12 buffaloes and 8 cattle) presented with history of anorexia, reduction in milk yield, suspended rumination, congested mucous membrane, scanty and pasty faeces and recurrent tympany not responding to routine medicinal management. Fifteen animals exhibited positive response to metal detector. Haematology revealed leucocytosis, neutrophilia and lymphocytopenia. Serum biochemical estimations showed a normal blood glucose, decreased albumin and increased total plasma proteins, globulin, AST, ALT, serum creatinine, BUN and plasma fibrinogen level. Exploratory rumenotomy under paravertebral block revealed adhesion between reticulum and abdominal wall and between reticulum and diaphragm. The rumen exploration revealed metallic foreign bodies (wire pieces, nails, coins, bolts, screw and rings) in fifteen animals and non-metallic foreign bodies (polythene bags, bunch of nylon threads, nylon ropes, cotton cloth pieces, sand and stones) in five. Ruminitis and area of sloughing and haemorrhages of ruminal papillae were observed in two cases.

RS 6: Cutaneous Cyst of Neck in a Non-Descript Bullock- A Case Report

Deepak Kumar Kashyap, Devesh Kumar Giri and Govina Dewangan
Department of Veterinary Surgery and Radiology, Arawali Veterinary College, Sikar (Rajasthan)

A 7-year-old non-descript bullock was presented to the Department of Veterinary Surgery and Radiology with a large and gradually enlarging mass at the neck region. Clinical examination of the bullock revealed large growth on the right side of the neck region and showing uniform fluctuation on manipulation. Exploratory puncture was done for differential diagnosis. Exploration showed cystic space with straw coloured fluid. Under asepsis, the radical surgery was performed following xylazine sedation (@ 0.1 mg/kg body weight, I/M) and desensitization of the site by local infiltration with 2% lignocaine HCL (8ml, locally). Postoperatively, the animal was administered antibiotics, and analgesics besides applying daily dressing. The animal recovered completely within 10 days without any secondary complications.

RS 7: Evaluation of Theloresectoscopy for Management of Teat Obstruction in Cows

Arul Jothi N., T.P. Balagopalan., P. Thiruselvame., B. Ramesh Kumar and S. Thilagar
Department of Veterinary Surgery and Radiology
Rajiv Gandhi institute of Veterinary Education and Research, Pondicherry (Pondicherry)

The efficacy of theloresectoscopy for relieving teat obstruction was studied in 135 teats of 120 milking cows over a period of two years (2013-15) by clinical and ultrasonographical evaluation. The anaesthetic protocol, injection Xylazine and ring block for theloresectoscopy, was found satisfactory for inserting the scope. Filling of teat sinus with 3 % Glycine solution provided better visibility of the site for resection. The obstructive lesions were assessed and then resected by underwater diathermy unit at a temperature of 70 -90°C for cutting and coagulation. Modified polyvinyl chloride tube (No:10) retained in the sinus for maintaining the patency was well tolerated by most of the animals. Ultrasonographic images on 5th postoperative day confirmed the reduction in the size of the lesions approximately to an extent of 60-70 %, 80-90% and 90-95% at the base, mid teat and tip, respectively. Blood tinged milk was noticed at least for 5 -10 days post operatively in 22 teats and were treated with styptics. Milk yield and milk flow rate per quarter

gradually increased up to 60-70%. Recurrence of delay in milk flow and mastitis were observed in 18 teats especially in teats which were having obstruction at the base. Poor success rate were also noticed due to poor owner compliance and extensive fibrosis of teat.

RS 8: Fibrosarcoma in a Murrah Buffalo

Devesh Kumar Giri, **Deepak Kumar Kashyap** and Govina Dewangan
Department of Veterinary Surgery and Radiology, Arawali Veterinary College, Sikar (Rajasthan)

A 12-years-old Murrah buffalo was admitted to the Department with the complaint of hard growth on the left leg for the last 2 months. Clinical examination and exploratory puncture revealed large lacerated, solid nodular growth at the level of pastern region. Surgical excision, along with some healthy tissues, was performed under xylazine (0.1mg/kg) sedation and local infiltration anesthesia using 7ml of 2% lignocaine hydrochloride. Collected tissues were submitted for the histopathological examination. Postoperatively, the animal was administered antibiotics and analgesics besides applying daily dressing. Histopathologically, the tissue sections showed neoplastic fibrous tissue proliferation having malignant pleomorphic spindle cells arranged in herring bone pattern. Complete recovery was observed on 12th post-operative day without any complications.

RS 9: Intestinal Perforation due to Dog Bite and its Surgical Management

A. Sangwan, K. Kachwaha, Mahendra Tanwar, Satyaveer Singh, P. Bishnoi and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science
Rajasthan University of Veterinary and Animal Sciences, Bikaner (Rajasthan)

It was diagnosed as a case of intestinal perforation on clinical examination. Laprotomy was done and the intestinal perforations were closed using synthetic absorbable sutures (PGA no. 3-0) with inverted Lambert pattern. Postoperatively, the animal was given antibiotics (inj. Dicrysticine-500 mg I/m), analgesics (inj. Meloxicam- 0.75 ml I/m) and fluid therapy (inj. DNS-5%- 150 ml I/v, inj. R.L.- 100 ml I/v, inj. Metronidazole- 50 ml I/v) as the animal kept off fed. Animal recovered well after having fever for three days which might be due to systemic infection.

RS 10: Management of Bilateral Contracted Flexor Tendon of the Carpal Joint in a Punganur Bull

R. Hanumansaheb, N. Dhana Lakshmi, M.M. Rajesh, M. Saibaba, K. Sudarshan Reddy, K. Manoj Kumar and Y. Pavani
Department of Veterinary Surgery, College of Veterinary Science, SVVU, Tirupati (A.P.)

A four years old Punganur bull (shorter breed in India) belonging to Livestock Research Station, Palamaner, Sri Venkateswara Veterinary University was presented with a history of complete flexion of both knee joints and inability to extend the limb since birth. Animal walked on knee joints. Bilateral tenotomy was advised. Animal was restrained in lateral recumbency and sedated with xylazine hydrochloride. Local infiltration with 2% lignocaine hydrochloride at the site was carried out. Skin incision was made on the medial aspect of the carpal joint and parallel to the tendon. The subcutaneous tissues were separated by blunt dissection. The tendon was transacted while forcibly extending the carpal joint. Cephalexin powder was sprinkled inside and wound was closed in routine manner. Postoperatively, dressing was done on alternate days. Antibiotic and analgesics were administered for 7 days. Caudal PVC splint was applied for 4 weeks with extension of the limb. The gap between the two retracted ends of the tendon was filled with fibrous tissue and the animal ambulance of the limb was normal after 5 weeks.

RS 11: Management of Foreign Body Induced Fore Stomach Affections in Bovines

V. Ramu, **M. Raghunath**, N.V.V. Hari Krishna, P. Ravi Kumar, P. Vidya Sagar and V.S.C. Bose
Teaching Veterinary Clinical Complex, N.T.R. College of Veterinary Science, SVVU, Gannavaram (A.P.)

The study was conducted on 10 clinical cases of cattle and buffaloes suffering from fore stomach disorders induced by foreign bodies and were referred for treatment to Teaching Veterinary Clinical Complex, Gannavaram. Detailed signalment, history, clinical observations, haematology, biochemistry and lateral reticular radiographs were

evaluated. The cases were diagnosed as traumatic pericarditis (n=4), diaphragmatic hernia (n=4) and traumatic reticuloperitonitis (n=2). In all the cases leukocytosis and neutrophilia in blood and peritoneal fluid was observed. Blood biochemistry in all the cases showed hypocalcemia and hypochloremia due to anorexia. Radiography was diagnostic and reliable for confirmation of foreign body induced fore stomach disorders. Left flank laparo-rumenotomy was done in all the cases to retrieve the foreign bodies and were treated accordingly.

RS 12: Morphometrical and Ultrasonographical Evaluation of Teat in Cows with Closed Obstructive Lesion

B. Udayakumari, T.P. Balagopalan, N. Aruljothi., B. Rameshkumar and S. Thilagar
Department of Veterinary Surgery and Radiology, Rajiv Gandhi Institute of Veterinary Education and Research, Puducherry (Pondicherry)

Eighteen cows presented with a history of milk flow disorders in one teat each to TVCC, Rajiv Gandhi Institute of Veterinary Education and Research, Pondicherry were selected for the present study. Based on the type of lesion confirmed by ultrasonography, they were divided into 3 groups of 6 animals each. Group I with focal lesion, Group II with diffused and Group III showing membranous obstruction. The shape of the teat was cylindrical in 15 cows and funnel in three. The skin colour and texture were normal without any external lesions and the consistency was hard in 12 teats. The teat-end shape was round in 7, pointed in 5, and round flat and pointed disk in 3 each. The length of the teat cistern upon probing ranged from 4.8-7.2, 3.2-8.6 and 5.0-7.2 cm in group I, II and III, respectively. The observations on morphometrical parameters viz; distance from floor to the affected teat tip, length, circumference and placement of the affected teat indicated the healthy status of the udder. The measurements of the internal structures viz; streak canal length (mm), teat cistern diameter at its middle and base (mm), teat wall thickness at the base, middle and tip (mm), location and morphometry of the obstructive lesion in the cistern or the wall and other pathological structural changes if any were studied ultrasonographically. Important features noticed were presence of anechoic region in the teat wall indicative of dilated blood vessels, irregular mucosal lining and hyperechoic teat wall.

RS 13: Paralysis in Farm Animals: A Study of 42 Cases

V. Devi Prasad, R.V. Suresh Kumar, N.V.V. Harikrishna, R. Mahesh, G. Kamalakar, J. Devarathnam and N. Sumiran
Department of Veterinary Surgery and Radiology, College of Veterinary Science, Proddatur (A.P.)

Present paper describes paralysis of various types recorded in farm animals like cattle, buffaloes, sheep and goat. Among various types, paralysis affecting the head, neck and spine appears to be less common when compared to that of limbs. In the head region, facial and trigeminal nerve paralysis have been recorded. In the neck region, paralysis affecting the cervical muscles besides structural alteration of *ligamentum nuchae* has been reported. Paralysis of the pectoral limbs was observed to involve various nerves like suprascapular, radial, and ulnar nerves; while that of pelvic limbs included sciatic, peroneal and gluteal nerves. Atypical cases like trauma involving various peripheral nerves, neurofibroma at the flank region etc. have also been recorded to cause paralysis. Various treatment aspects along with their outcome have been detailed.

RS 14: Post-Traumatic Corneal Opacity in a Goat and its Management

A.R. Ninu, S. Kokila**,** D. Vishnugurubaran, P. Shankar, M. Shiju Simon and R. Ram Prabhu
Department of Veterinary Surgery and Radiology, Veterinary College and Research Institute, Tirunelveli, Tamil Nadu (T.N.)

A goat was brought to Teaching Veterinary Clinical Complex with corneal opacity following trauma to the eye. No gross discontinuity was noticed in the cornea. Placentrix injection was given subconjunctivally twice at an interval of three days along with antibiotic eye ointment and tetanus toxoid. Follow-up revealed a thin layer of membrane covering the cornea, a portion of which was irritating the cornea evidenced by epiphora. The excess membrane was snipped off under retrobulbar nerve block with lignocaine. Autohaemotherapy was given with 2 ml blood intramuscularly and antibiotic eye ointment was continued. The cloudiness in the cornea reduced slowly and clarity of cornea was regained over a period of 2 weeks.

RS 15: Reliving of Oesophageal Obstruction without Surgical Intervention in Three Cases

Manjunatha, D.R., Nagaraju, N., Basavaraj Balappanavar, Srinivasmurthy, K.M. and Vasanth M.S.
Department of Veterinary Surgery and Radiology, Veterinary College, Hassan (Karnataka)

One buffalo, one Holstein Frisian cross breed cow and one Jersey Cross Breed cow, aged about 5yrs, 4 ½ year and 3 years respectively were presented to Teaching Veterinary Clinical Complex, Hospital, with the history of severe salivation and swelling near the neck. On clinical examination animals revealed retching, bloat and movable mass in cervical oesophageal region. All the three animals were sedated with Xylazine Hydrochloride 0.05mg/kg body weight intramuscularly. Gunther's mouth gag was applied. While the mass was manipulated percutaneously, by assistants, pushing it towards pharynx, one hand was passed into the mouth of the animals to catch and remove the material. The materials removed were carrot, beetroot and potato. This method can be employed in freely movable oesophageal obstruction cases.

RS 16: Removal of *Coenurus cerebralis* (Gid) in a Doe

M.O. Kalim, Rukmani, S.K. Tiwari, R. Sharda, S. Singh, N. Gopal and A.S. Sengar
Department of Veterinary Surgery and Radiology, College of Veterinary Science & A.H., Anjora, Durg (C.G.)

A two years old non-descript doe was brought to the Department of Veterinary Surgery and Radiology with complaint of anorexia, bleating, head pressing against the wall and circling movement since last 1 month. Coenerous cyst was diagnosed on palpation of the occipital bone between the two horns. Surgical removal of the coenurous cyst was attempted. The animal was controlled in lateral recumbency with affected side upwards. The operative site was sterilized and blocked by 2% lidocaine hydrochloride. A cruciate incision was given to make four flaps each of which was detached from the subcutaneous tissue by blunt dissection. The thin bone was scrapped and a hole was made sufficiently large enough to remove the cyst slowly, Care was taken not to rupture the cyst. Before suturing the skin, sulphanilamide powder was applied over the wounds. The flaps were sutured by interrupted pattern using silk and wound covered with a benzoin seal. Dextrose saline 5% (500 ml) was administered continuously into the jugular vein during operation. Post-operatively animal was given Oxytetracycline and Melonex for 5 days. It was advised to keep the animal in a clean house and not allowed to rub its head. Suture was removed after 8 days. The animal recovered uneventfully.

RS 17: Retrospective Studies on Eye Tumours in Cattle of North Gujarat

M.S. Gami, J.J. Parmar, C.N. Patel, J.B. Patel, H.A. Avasthi, K.N. Joshi and P.B. Patel

During the period of four years (2006 to 2010), a total of 1490 different surgical cases were admitted. Out of these, 16 cattle (1.07%) were presented with different eye tumours involving complete eyeball (50.00%), upper and lower or both eyelids (31.25%), third eyelid tumour (12.50%) and dermoid cyst (6.25%). Incidence were recorded between age group of 1 day to 12 years which were highest in middle age (37.50%) followed by young (25.00%) and old age (6.25%). Incidence was higher in females (93.75%) than male (6.25%), and in right eye (62.50 %) than left eye (37.50%).The seasonal incidence of eye tumours was higher in winter (43.75%) followed by monsoon (31.25%) and summer (25.00%). Breed comparison revealed higher incidence in Holstein Fresian crossbreds (81.25%) followed by Kankrej breed (18.75%).

RS 18: Role of Ultrasonography in Assessing Intussusception in Bovine

Riyaz Ahmad Wani, **M.S. Bhadwaj** and A.K Gupta
Division of Surgery & Radiology, F.V.Sc. &.A.H., SKUAST-J, R.S. Pura, Jammu (J.&K.)

Surgical affections of gastrointestinal tract are of great economic importance because of severe losses in productivity of the animals. Most obstructions in cattle result from strangulation or intussusception and are difficult to diagnose. The study was conducted on 34 clinical cases of cattle suspected for intestinal obstruction due to intussusception. The ultrasonographic findings of absence of intestinal motility, distended intestinal loops having hyper-echoic intestinal wall with comparatively hypoechoic passively moving fluid ingesta, and presence of anechoic peritoneal fluid were consistent. These findings were confirmed on surgery. However, the characteristic target appearance of intussusception on ultrasonography was detected only in 35% cases following per rectal manipulation.

Ultrasonography was found highly valuable in the confirming diagnosis of intestinal obstruction, especially in pregnant and small sized animals where rectal palpation of intestines has limitation.

RS 19: Scrotal Ablation Technique for Treatment of Scirrhous Cord in Sheep

Manjunath S.P., ChandreGowda C.T., **Manjunath D.R.** and Sunil Kumar M.A.
Department of Veterinary Surgery, Veterinary College, Hassan (Karnataka)

A sheep was presented to Veterinary dispensary, Anathi, Karnataka with enlarged testicles since four days. The swelling was painful and hot to touch. The sheep had a history of castration by burdizzo's method. Based on the clinical signs and history, it was diagnosed as scirrhous cord. Streptopenicillin was administered for three days. No improvement in the condition was observed. Hence scrotal ablation technique was followed for surgical management of the scirrhous cord. Anesthesia was carried out by ring block around the neck of the scrotum using 2% lignocaine. Both the testicles were removed after ligation of the spermatic cords separately with silk no.1. Skin was sutured with nylon no.1 in vertical mattress pattern. Sutures were removed on 12th day. The sheep recovered uneventfully.

RS 20: Squamous Cell Carcinoma of Horn and its Surgical Management-A Case Report

Ravendrasingh, J. Khurma and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science
Rajasthan University of Veterinary and Animal Sciences, Bikaner (Rajasthan)

An eight year old Kankrej bullock was presented to TVCC, RAJUVAS, Bikaner with a history of movable, bending and dropping left horn. Clinical examination revealed a foul smelling discharge and development of cauliflower-like growth at base of horn which was diagnosed as horn cancer. Hematological parameters revealed decreased level of Hb (6mg/dl), PCV (19%) and TEC (3.5x10^{6}/µl). The bullock was sedated using Xylazine (0.1mg/kg b.wt. IM) and cornual nerve block was given using 2% lignocaine HCL. Animal was restrained at right lateral recumbency. Surgical site was prepared aseptically and horn was excised at the base using flap method. The wound was closed in routine manner as skin sutured using silk in cross mattress pattern. Histological examination of cancerous tissue collected from middle region of horn core revealed typical keratinizing squamous cell carcinoma with characteristic epithelial pearls. Postoperatively, Broad-spectrum antibiotics C-flox (Ciprofloxacin, 5mg/kgb.wt.IM for 5 days) and NSAIDS (Meloxicam, 0.5mg/kg b.wt. IM for 3 days) were administered. Suture line was cleaned regularly with clinical spirit for 10 days and sutures were removed on 10th day post-operatively. The bullock recovered without any complication.

RS 21: Prevalence of Foreign Bodies in Rumen and Reticulum in Cattles and Buffaloes

Gahlod B.M., Badgujar C.L., Mugale R.R., Kalse K.P., Mane A.A. and Ghonshikar V.B.
Department of Veterinary Surgery & Radiology, College of Veterinary & Animal Sciences
Maharashtra Animal & Fishery Sciences University, UDGIR (Maharastara)

A total of 148 clinical bovine cases with a history of no response to the previous medical treatment were presented at TVCC, COVAS, Udgir (MS) from January to May-2015. The animals were subjected to the clinical and radio-graphical examinations and 36 were found positive for foreign bodies. Haemato-biochemical investigations (DLC, PCV, TLC, total protein, AST & ALT) were done. After confirmation, the cases were divided into three groups- Group-I (n-10) with metallic FB (wires, nails etc), Group-II (n-12) with non-metallic FB (pieces of plastics, leathers, clothes, ropes) and Group-III (n-14) with both types of FB. The incidence of foreign bodies (metallic & non-metallic) was 4.11 %, penetrating 58% & non-penetrating foreign bodies 42% in cattle & buffaloes. Rumen showed a significantly higher occurrence of foreign bodies (72.6%) than reticulum (27.4%).The animals were subjected to the Lapro-rumenotomy operation. Significant leukocytosis, neutrophilia and corresponding lymphopenia, hyperprotenemia and increased activity of AST& ALT are the consistent finding in complicated cases. Radiography is an efficient tool for visualization of metallic foreign body and not for in assessing adhesions or fibrinous deposits. Hemato-biochemical assessment is of additional values in discriminating between various outcomes of foreign bodies in ruminant digestive tracts.

RS 22: Successful Delivery of Three Live Fetuses Through Caesarean Section in Fec-B Doe

Beenish Qureshi, Raja Aijaz Ahmad, Khadim Hussain Dar and Hakim Athar
Division of Veterinary Surgery and Radiology, FVSAH, SKUAST, Kashmir (J.&K.)

A Fec –B doe weighing 32.5kgs, 2.5yrs of age was presented with the history of straining from last 16 hours. The per vaginal examination revealed insufficient cervical dilatation. The animal was then administered Epidosin 2ml IM stat, however no significant change was seen. The clinical examination revealed various physiological parameters within normal range and therefore emergency surgical intervention was planned. The animal was administered xylazine hydrochloride @ 0.03 mg/kg body weight intramuscularly (IM). Five minutes later lumbosacral epidural anaesthesia was induced using 2% lignocaine hydrochloride (4mg /kg bwt). Oblique flank incision was given after thorough scrubbing and shaving. After the skin incision, uterus was exteriorised and incised. Three live fetuses were recovered of which two were male and one female. The uterus was closed with Catgut size 2-0 using Lambert and Cushing suture pattern. Muscles were closed using Catgut size 2 by Continuous suture pattern and skin was closed with silk with horizontal mattress sutures. Skin sutures were removed on 12th postoperative day. The animal was examined again at 45th postoperative day and had put on extra 2kgs of weight.

RS 23: Surgical Correction of Bilateral Dermoid in a Sahiwal Male Calf

M.O. Kalim, Rukmani, R. Sharda, S.K. Tiwari, A.S. Sengar and S. Singh
Department of Veterinary Surgery and Radiology, College of Veterinary Science & A.H., Anjora, Durg (C.G.)

A one day old sahiwal male cow calf was brought to the Department of Veterinary Surgery and Radiology with a history of abnormal haired mass on both the eyes since birth. On clinical examination it was found that large fleshy mass was attached to the cornea and sclera with large number of hairs arising from the surface. The calf was unable to close both the eyes normally. Blepharospasm was frequently observed as the hairs on the dermoid were irritating the cornea and watery discharge of both the eyes. However blinking, consensual and photomotor papillary reflexes were intact. The animal was restrained in lateral recumbency. Akinesis of eyelids was achieved by giving auriculopalpebral nerve block and sensory innervations of eye lids were blocked by linear infiltration above the margins of the eyelid using 2% lignocaine hydrochloride. Both the dermoids were removed from the underlying tissue by superficial flap resection and simple interrupted sutures were applied using with 6-0 chromic catgut. Postoperatively Gentamicin eye drops and hydroxy methyl cellulose eye drops were instilled thrice daily for 5 days. Postoperative recovery was uneventful and re-examination after two months did not reveal any recurrence of dermoid

RS 24: Surgical Correction of Congenital Atresia Ani with Double Tail in a Crossbred Calf

S. Kokila, P. Shankar, D.Vishnugurubaran, A.R. Ninu and R. Ram Prabhu
Department of Veterinary Surgery and Radiology, Veterinary College and Research Institute, Tirunelveli (T.N.)

A two day old crossbred calf was presented to Teaching Veterinary Clinical Complex, Tirunelveli with a history of not voiding dung since birth, anorexia and abdominal distension. On physical examination the animal looked dull, rectal temperature 101°F bloated abdomen, absence of anal opening,but appearance of a bulge in the anal region on pressing the abdomen and presence of double tail (one normal tail and the other rudimentary tail of around 3 cm). The calf was positioned on sternal recumbency. Under epidural anaesthesia of 3 ml of 2% lidocaine, a circular incision was made on the skin and subcutaneous tissue at the site where the anal sphincter is normally situated. The rectal pouch was identified, then the rectum was incised meconium drained out and the rectal mucosa was sutured to the skin using silk. The rudimentary small tail was excised. Post operative antibiotic Streptopenicillin 1g i/m was administered for 5 days, tramadol @ 2mg/kg body weight i/v for 3 days.

RS 25: Surgical Excision of Bilateral Inter digital Fibroma in a Cow-A Case Report

V. Murali Krishna, N. Dhana Lakshmi, P. Veena, M. Saibaba, M.S.S.V. Phaneendra and K. Sudarshan Reddy
Department of Veterinary Surgery, College of Veterinary Science, SVVU, Tirupati (A.P.)

A 5 year old cow was presented with history of lameness with gradual change of gait since last six months. After

proper physical examination, a soft bulging mass was palpated at the interdigital space of both hind limbs. The case was diagnosed as that of Bilateral Inter-Digital Fibroma (IDF) and was decided to remove both fibromas surgically to improve the gait of the animal. The animal was sedated with Xylazine @ 0.1mg per kg bodyweight IM. Local anaesthesia was achieved by infiltration of 2% lignocaine at the site after swabbing it with Tr. iodine. The bilateral growths of different sizes of inter digital region were removed successfully. Systemic antibiotic and anti – inflammatory drugs were administered for 5 days and the wound was bandaged firmly with antiseptic powder application and fly repellent ointments daily for 10 days. No recurrence of growths was observed over a period of 6 months.

RS 26: Surgical Management of Bilateral Ear Haematoma in Two Bucks

S.M. Qureshi, Y.P. Singh, M.C. Parashar, Pradeep Kumar and A.K. Bishnoi
Department of Veterinary Surgery and Radiology
College of Veterinary and Animal Science Navania, RAJUVAS, (Rajasthan)

Two bucks of Sirohi breed aged one and two years, respectively, brought together to the TVCC, CVAS, and Navania from Goat farm under NMPS scheme Bojunda Chittoregarh (Raj) were with the history of chronic full length swelling of both ears since 25 days. On clinical examination cases were diagnosed as aural haematoma. Both animals were treated there at farm by on duty Veterinarian by aspiration of haematomal fluid and injection of corticoids and antibiotics locally several times but every time reoccurrence of accumulation of fluid was there. Both these animals were treated surgically under general anaesthesia by giving full length incision on haematomal swelling and applying Quilt sutures. Inj. Gentamicin 5 mg/kg B.Wt, and Inj. Meloxicam 0.2mg/kb B.Wt. I/M were given 7 and 3 days, respectively. Both animals recovered successfully after 15 days.

RS 27: Surgical Management of Congenital Ocular Dermoid in Calves-A Review of Five Cases

Shiju Simon, M., Chhavi Gupta, P. Sankar, R. Ramprabhu and S. Prathaban
Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli (T.N.)

Corneal dermoid is a congenital lesion observed rarely in newborn animals. Four female and a male calves of age within a week were presented with the history of hair growth on both or single eyes. On clinical and physical examination all the animals were apparently healthy and vital parameters were within the normal level. Three cases had bilateral; two cases had unilateral dermoid (one on right eye and one on left eye). Ophthalmic examination revealed corneo-scleral dermoid in two bilateral cases, corneo-scleral-palpebral conjuntival-nictitating dermoid in two cases and sclera-palpebral conjunctival dermoid in one case. In all the cases ocular irritation, mild blepharospasm and epiphora were evident. Auriculopalperbral, retrobulbar nerve blocks and local infiltration around the eyelids were induced using 2% lignocaine hydrochloride. Cyst was peeled off along with the dermal layers containing the follicles and temporary tarsorrhaphy was performed. All the animals had an uneventful recovery.

RS 28: Surgical Management of Intestinal Obstruction and Intussusceptions in Bull

Mrunali Kamble
Department of Surgery and Radiology, Nagpur Veterinary College, Nagpur (Maharastra)

The bull of 6 years was presented in a clinic with the complaints of anorexia and not passing feaces since 4 days and abdomen was extended. Clinically abdomen was extended and per-rectal examination revealed blood tinged mucus was observed. On the bases of history and clinical signs we decided for laprotomy. As to save the life, exploratory lapratomy was undertaken. Under the local anaesthesia, with taking all aseptic precaution abdomen was opened to locate the intussusceptions and feacolith in jejunum part. Incision was given on obstructed part to remove the faecolith and end to end anastomosis was done in intussusceptions part. The Iaprotomy incision was closed by routine standard surgical procedure. Post operatively, the bull was maintained on fluid therapy along with Antibiotic, Analgesics and B-complex for 7 days.

RS 29: Surgical Management of Unusual Obstruction of Teat in a Crossbred Cow

S.P. Manjunath, V. Parana Kumar, C.T. Chandre Gowda and D.R. Manjunath
Veterinary Dispensary, Anathi, Channarayapattana, Hassan, (Karnataka)

A crossbred cow, presented to Veterinary dispensary, Anathi, Hassan, Karnataka was examined for extensive obstruction of a teat cistern. Patient owner inserted a need stick into teat canal to make it wider and it was retained into the canal causing blockage. Need stick was broken into two pieces in the process of manual removal by owner. Theology was performed for surgical removal of pieces. One piece was taken away by artery forceps and other piece by milking. A sterile empty pen refill was used to maintain the patency and better healing of teat canal. Here, suturing pattern employed in treating teat fistula was successfully adopted to close surgical wound. Usual milk yield was observed after 10 days to surgery.

RS 30: Evaluation of Tube Cystotomy Through Laparotomy as a Surgical Treatment for Obstructive Urolithiasis in Male Buffalo (*Bubalus bubalis*) Calves

J.S. Khosa, Diler Singh, S. Gharu and T.K. Gahlot
Department of Veterinary Surgery and Radiology, CVAS, RAJUVAS, Bikaner (Rajasthan)

Tube cystotomy was used to treat 40 buffalo calves with obstructive urolithiasis. The folly's tube was intermittently occluded 3 to 4 days after placement to determine if urine could be voided through the urethra. If the animal showed no discomfort during urination after the cystotomy tube had been occluded for several days, the tube was removed. This procedure was successful in relieving urethral obstruction in 35 animals. The mean time until the animal could urinate freely and until the cystotomy tube was removed were 12 days. Follow-up was available for 10 animals; seven were alive with no recurrence of urinary obstruction. One calf died from cause's unrelated to urinary obstruction 1 year postoperatively. Two calves died from unknown causes, and one goat died after urinary obstruction recurred.

RS 31: Vasectomy in Farm Animals from Anterior Median Raphe Site: Six Clinical Cases

A.K. Bishnoi, Pradeep Kumar, S.M. Qureshi, Y.P. Singh, M.C. Parashar,
Nazneen Atwal, Raj Kumar and Goverdhan Singh
Department of Veterinary Surgery and Radiology, CVAS, Navania, RAJUVAS, (Rajasthan)

In six farm animals including 3 rams, 2 bucks and one bull vasectomy was performed to produce teasers. In all the animals approach to the ductus deferens was made through the incision on the anterior median raphe of scrotum. Through the same raphe incision, after bluntly dissecting the tunic vaginalis, ductus deferens of both sides were located and resected. On each side, approximate 3 cm piece of deferens was resected after ligating it with catgut# 2-0 or 3-0 on each end. During the procedure of grasping deferens with the instrument, minor testicular surface haemorrhage was noted on each testis of all cases. In all cases, the surgical wound healed within a two week period without any scrotal swelling and adhesion formation.

RS 32: Obstructive Urolithiasis in Young Calves, Some Uncommon Observations and their Management

Mohsin Ali Gazi , D.M. Makhdoomi, A.M. Ganai and G.N. Shiekh
Department of Veterinary Surgery and Radiology
Faculty of Veterinary Science and Animal Husbandry, SKUAST-K (J.&K.)

In a completely randomised block design clinical study was conducted in calves (n=45) divided in three different groups, wherein the replicates received diverse surgical treatments as demanded by clinical situation. Based on expression of symptoms, the animals were monitored preoperatively for physical status of urethra, urinary bladder, ureter and adjacent structures for any deviations. Various uncommon observations recorded included urethritis and subcutaneous urine accumulation and oedema extending from umbilical up to thoracic region, massive bladder ruptures at various sites and along with the ruptures, there was rupture of cranial vesicular artery with retrieval of blood clots from urinary bladder and peritoneal cavity, empty urinary bladder but ureter blockade with massive gritty/sandy calculi, formation of calculi in the fibrinous layer denuded from urinary bladder, sandy, glistening and

brittle calculi embedded in mucosal layer, coated with blood clots. These deviations were corrected and animals were given treatment most suited to their clinical status including blood transfusion in two of the calves.

RS 33: A Rare Case of Obstructive Sialolithiasis and its Surgical Management in a Bullock

S.B. Akhare, M.V. Kamble, B.M. Gahlod, S.V. Upadhye and M.S. Dhakate
Department of Surgery & Radiology, Nagpur Veterinary College, Nagpur (Maharashtra)

A seven year old bullock was reported with the history of developing hard swelling on left cheek which was gradually increasing in size since last 7-8 months. The clinical examination of the animal revealed the presence of well defined hard nodular swelling along the course of Stenson's duct over masseter muscle on left cheek. Paracentesis of the nodular swelling reveals a clear transparent viscous fluid. The case was diagnosed as a salivary calculus and surgery was undertaken. The calculus was exposed by giving incision directly on the calculi after fixing it with the finger. The calculus was removed with the help of Allies tissue forceps. The duct was lavaged with normal saline and the patency of the duct was confirmed by catheterization rostrally. The incision on the dilated duct was closed with chromic catgut No.1-0 by applying simple continuous sutures. The second suture line was applied inverting and including the overlying fascia. The skin incision was closed in a routine fashion by applying simple interrupted suture with nylon. The antibiotics and analgesics were administered for 5 days along with regular antiseptic dressing of the surgical wound. The surgical wound healed without any leakage and complications. No recurrence was reported till 4 months after the surgery when followed up.

RS 34: A Rare Case Report of Trans-Intercostal Evisceration of Reticulum in a Goat

A.R. Ninu, S. Kokila**,** D. Vishnugurubaran, M. Shiju Simon, P. Shankar and R. Ram Prabhu
Department of Veterinary Surgery and Radiology, Veterinary College and Research Institute, Tirunelveli (T.N.)

A 2 month old goat was admitted to Teaching Veterinary Clinical Complex with evisceration of reticulum through a penetrated wound in the left side of thorax between last two ribs. There was rupture in the reticulum with leakage of contents. The animal was hypothermic with shivering. It was stabilized with warm intravenous fluids. Preoperative antibiotics, analgesics, and tetanus toxoid was administered. After aseptic preparation, surgery was performed under propofol anaesthesia. A part of reticular contents were removed to enable reduction and replacement. The ruptured area of reticulum was sutured in double interrupted pattern and replaced into the abdominal cavity. The external wound was sutured in interrupted pattern encompassing adjacent ribs followed by a second layer of continuous pattern muscle sutures and routine closure of skin. An uneventful recovery followed after a week of post-operative antibiotic therapy.

RS 35: A Typical Case of True Schistosomus Reflexus in a Local Ewe of Kashmir

Mehraj-U-Din Dar, Firdous Ahmad, Khadim Hussain Dar and Hakim Athar
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences & Animal Husbandry
SKUAST-Kashmir (J.&K.)

An adult ewe of 3.5 years of age and weighing 34.65 kg at full term of pregnancy as per the owner was presented with the history of straining and unable to undergo the normal physiological process of lambing since last 6-8 hours. The clinical examination revealed various physiological parameters within normal range. However, vaginal examination revealed a deformed fetus in the pelvic cavity that had left insufficient room for fetal manipulation. Therefore emergency surgery was planed. The animal was sedated with xylazine hydrochloride @ 0.03 mg/kg body weight administered intramuscularly (IM). The ewe was prepared for aseptic surgery. The dystocia was relieved by caesarean section following a standard procedure used in ovines under local anaesthesia by using 2% lignocaine hydrochloride and a case of true Schistosomus reflexus (SR) in a ewe was confirmed from physical examination of the defective foetus. Postoperatively, ceftriaxone (0.5 g, BID, IM) and meloxicam (0.2mg/kg, OD, IM) were prescribed for five and three days respectively. The ewe was kept under observation for four weeks. Antiseptic dressing using 5% povidone iodine was continued twice daily till suture removal on day 12th. The ewe was found active on 25th days post-surgery with gain of extra 3 kg bodyweight.

RS 36: An Unusual Case of Complete Oesophageal Choke in a Bullock

S.B. Akhare, S.V. Upadhye, M.S. Dhakate, M.R. Kate and C.V. Patond
Department of Surgery and Radiology, Nagpur Veterinary College, Nagpur (Maharashtra)

An eight year old non-descript bullock was reported with the history of inappetance since 8 hours and suspected ingesion of foreign object. Clinical sign included normal temperature (100.5° F), regurgitation of ingesta through nostrils and severe salivation with severe tympany. Clinical examination revealed a swelling due to a palpable non moving round object at the left ventrolateral mid cervical region and the condition was diagnosed as oesophageal choke. An emergency cervical oesophagotomy was performed in standing position and the sweet lemon was retrieved from the oesophagus. Intravenous fluid therapy consisted of administration of 2L of 5% Dextrose-normal saline postoperatively. Food was withheld for 7 days. The animal was given gruel and finely cut grasses from 7th day onward. The sutures were removed on 12th day. The animal showed uneventful recovery.

RS 37: Aural Hematoma with Chronic Otitis in a Goat

S. Kokila, M. Shiju Simon, A.R. Ninu, D.Vishnugurubaran and R. Ram Prabhu
Department of Veterinary Surgery and Radiology,Veterinary College and Research Institute, Tirunelveli (T.N.)

A non-descript, one year old female goat was presented to Teaching Veterinary Clinical Complex, Tirunelveli with the history of swelling of the right ear for the past one week. On clinical examination there was swelling on the inner aspect of pinna and purulent discharge from the right ear. The case was diagnosed as aural hematoma with chronic otitis. Under sedation, a nick was made and a triangular flap taken out. Serosanguinous fluid was completely drained out and tincture iodine was infused inside followed by application of pressure bandage. The ear canal was cleaned .Owner was prescribed antibiotic ear drops thrice daily for a week and oral antibiotic was given for a week.

RS 38: Bovine Ocular Squamous Cell Carcinoma in Two Cases

A.M. Patel, **J.V. Vadalia** and P.B. Patel
Department of Veterinary Surgery & Radiology, College of Veterinary Science & Animal Husbandry
Junagadh Agricultural University, Junagadh (Rajasthan)

Invasive bovine ocular squamous cell carcinoma is reported in a twelve year old Holstein Friesian crossbreed cow and 8 years old Jaffrabadi buffalo. In both of the cases, eyelids were involved as ulcerated mass. The mass had covered entire globe, invaded and destroyed the orbital contents internally. Despite destruction of surrounding tissues and adjacent bones, the optic nerve was entirely intact. After enucleation, tissue specimens were examined microscopically following H&E staining. Macroscopic and microscopic characteristics of the lesion were in agreement with invasive squamous cell carcinoma, without evidence of damaged nerve.

RS 39: Comparative Study of Different Surgical Approaches for Caesarean Operation in Bovine

Mane A.A., Gahlod B.M., Badgujar C.L., Mugale R.R. and Ghonsikar V.B.
Department of Veterinary Surgery and Radiology, COAS, Udgir, (Maharashtra)

Ten cases of different breeds of cattle and buffalo were presented at TVCC, Udgir (MS) with a history of advanced pregnancy. Clinical examination revealed incomplete dilatation of cervix (60%), uterine inertia (30%), and emphysematous foetus (70%). In Group I (n=5), caesarean operation was performed through right ventro-lateral oblique incision. The observations such as haemorrhage and improper exteriorization of uterus were noted and the operation was completed in 70-90- minutes. In Group II (n=5) caesarean operation was carried out through left ventro-lateral oblique incision with minimum haemorrhage, adequate relaxation of muscles, proper exteriorization of uterus and it took 40-50 minutes for complete operation and recovery was uneventful in all the cases of this group. It is concluded that left ventro-lateral oblique incision approach was found to be more suitable for caesarean section in bovine than right ventro-lateral oblique incision.

RS 40: Case Study of Diagnosis and Treatment of Benign Tumours in Bovine

Satbir Sharma, Sandeep Saharan, Parminder Kaur, R.N. Choudhary,
Deepak Kumar Tiwari, Vijay Vikash and Babu Lal Jangir
Department of Veterinary Surgery and Radiology, COVS, LUVAS, Hisar (Haryana)

The study was conducted in nine bovine, presented for localized soft tissue swelling on the vulvar lips (n=5), on the ventrum of neck (n=2) and in the mammary gland (n=2). All animals presented were of 4-9 years of age group and had a history of progressive development of the lesion. The biopsy specimens were taken under local anaesthesia which revealed the presence of fibroma in all animals. The localized benign tumours were resected under xylazine sedation and local anaesthesia. All the animals responded well to the treatment and recurrence was not reported in any of the case. It could be concluded from the study that fibromas have high chance of occurrence in bovine and respond well to radical resection.

RS 41: Clinico-Surgical Management of Hoof Disorders in Goats of Central Gujarat

T.A. Mehta, D.B. Patil, P.V. Parikh, M.S. Bhatia, P.K. Rajput, A.J. Pal and A.I. Sama
Department of Veterinary Surgery and Radiology, VCAAU, Anand (Gujarat)

The Present investigations were aimed to record the incidence of hoof disorders and to evaluate standardized treatment protocol for management of various hoof disorders in goats. The functional hoof trimming of affected animals were carried out in all the affected animals. Random samples of hoof shavings and blood for laboratory estimation were collected. The information derived from surveillance using an evolved proforma was analyzed and results were drawn in relation to age, season, floor condition, housing system, sex and feeding practices. Different types of hoof lesions were recorded and treated. The functional hoof trimming in 230 animals facilitated detection of subclinical laminitis lesions and reduced the progression of disease. The use of proper hoof trimming instruments facilitated comfortable functional hoof trimming with less manpower and time.

RS 42: Different Teat Affections in Dairy Cows-A Review of 40 Cases

N. Nagaraju, Sudheesh S. Nair, Manjunath D.R., Balappanavar B.R., Ramesh Rathod and Vasanth M.S.
Department of Veterinary Surgery and Radiology, Veterinary College, Hassan (Karnataka)

Forty dairy animals with different teat affections presented to Veterinary College Hospital, Hassan during April 2014 to April 2015. Of the 40 cases 4animals had deep lacerated wounds on teats, 3 superficial lacerated wounds, 3 teat fistulas, 6 teat fibrosis,4 teat tumours, 3 hard milkers, 2 free milkers, 11papiloma of teats, 2 teat polyps and 2 lactoliths. Deep lacerated wounds and superficial wounds were surgically sutured with non absorbable sutures after ring block using 2% local anesthesia. After surgical treatment of 3 cases of teat fistula, 2 had mastitis. Of 6 teat fibrosis cases, 4 were fibrotic nodules in teat sinus which were removed using teat tumour extractors. Two completely fibrosed teats were treated but no results.Four cases of teat tumours were extracted using teat tumour extractor. Hard milkers were treated with teat dilators and Larson's teat plug. Papilomatous growth on teats cauterized with thermo cautery .Teat polyps were surgically removed using teat tumour extractor. Laccoliths moving in the teat sinus after forceful milking came out of teat orifice.

RS 43: Evisceration in New Born Calf-A Case Report

Neelam Tandia, Shobha Jawre and Anuradha Nema
Department of Veterinary Surgery, College of Veterinary Science and Animal Husbandry, Rewa, NDVSU (M.P.)

A one day old calf brought to the TVCSC Rewa from the nearby village with the evisceration of omentum through umbilicus with profuse bleeding and the condition of calf was grave, however the calf was stabilized by administering emergency drugs that is corticosteroid, styptics and fluid therapy. Then taking owner into consideration and maintain fluid therapy with all the aseptic precautions, 2% lignocaine HCl was infiltrated all around the site and bleeding points were ligated with chromic catgut no.1-0 followed by repositioning of the eviscerated omentum after thorough lavage then the ring like structure on the umbilicus was refreshed and sutured in two layers using catgut as in usual manner. Postoperative fluid therapy, antibiotic along with analgesic was administered up to seventh and third

post-operative day respectively. The skin sutures were removed on tenth post operative day. The calf fully recovered uneventfully.

RS 44: Interrelationship of Calcium, Phosphorous and Magnesium Shift in Blood, Urine and Calculi in Calves Affected by Urolithiasis

Aarif M. Khan, Dil Muhammad Makhdoomi and Suhani Bashir
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry SKUAST-K, Srinagar (J.&K.)

The study was conducted out in 28 male calves, aged 3-18months during 2007-2010 in TVCSC Shuhama, Kashmir. Though all the cases were managed surgically, an attempt was made to find out the probable cause of the disease and to ascertain the possible role of calcium, phosphorous and magnesium shift in urine, blood and calculi. The study revealed that calculi contain 70% phosphorous, 20% calcium and 10% oxalates. This was clinically substantiated by the proportionate decrease in blood and urine calcium levels. The levels of creatinine and urea in urine, blood and calculi revealed calcium, phosphorous and their interrelation during the phase of urolithiasis, it could be conceived that ingestion of a ruminant feed containing high amounts of phosphates by a ruminant, physiologically with a non-functional rumen results in high absorption of the phosphates. This results in depletion of calcium absorption and calcium being excreted through urine.

RS 45: Malignant Melanoma in a Holstein Friesian Cow-A Case Report

S. Ravikumar, B.N. Nagaraja and E. Shivakumar
Department of Surgery and Radiology, Veterinary College, KVAFSU, Bangalore (Karnataka)

A six year old Holstein Friesian cow was referred to the Department of Surgery and Radiology, Veterinary College, KVAFSU, Bangalore with a drooping mass near the right phalangeal joint of the hind limb. According to the owner, the growth had appeared one year ago, and during this period the cow had no other abnormalities. The mass gradually enlarged over a period and at the time of presentation the mass was interfering with the locomotion of the cow. Upon clinical examination, mass was ulcerated and adhered to medial aspect of right phalangeal joint. Mass was excised surgically under high plantar digital nerve block. Histopathology of excised mass revealed malignant melanocytes. Surgical wound healed without any complications and animal recovered uneventfully.

PS 46: Management of Foot Rot in Sheep at High Altitudes of Kashmir Valley

S. Adil, H.M. Khan, Khadim Hussain Dar, R.A. Pattoo and I.U. Sheikh
Division of Livestock Production and Management, SKUAST-K, Srinagar (J.&K.)

The affected animals exhibit lameness, loss of body condition, reduced production and fertility. The main predisposing managemental factors being muddy pastures, high stocking densities, winter housing, reduced foot trimming and failure to isolate the affected sheep. The main factor contributing to foot rot is the presence of muddy conditions in these pastures because of frequent rains. Additionally, the sheep are stocked together in large numbers during night which multiplies the problem. Thus, in order to prevent the incidence of foot rot at high altitudes of Kashmir, the sheep should be allowed to graze in dry areas as far as possible and hooves be trimmed at regular intervals. Most importantly, they must be stocked in small numbers during night and that too at different areas after frequent interval of few days.

RS 47: Possible Role of Nutrition on the Development of Obstructive Urolithiasis in Young Calves in Kashmir Valley

D.M. Makhdoomi, M.A. Ganai, Mohsin Gazi, G.N. Sheikh, Md. Moin Ansari, Rafiq Ahmad Shahand and Showkatul Nabi
Division of Veterinary Surgery and Radiology, FVSAH, SKUAST-K, Srinagar (J.&K.)

The study was conducted on cases presented for treatment of obstructive urolithiasis to Teaching Veterinary Clinical Services Complex for a period of one year. Present history included present aliment and symptoms. The

clinical examination was done, where status of eye balls, visible mucus membranes, smells of breath was recorded. Much emphasis was laid for urinary conduct examination regarding, presence of calculi in the palpable part of urethra from external urinary orifice, pre-scrotal, post-scrotal and ischial part of urethra, pattern of urination, bladder distension, ruptured and intact bladder, degree of abdominal distension and abdominal thrill. Clinical diagnosis was confirmed by ultrasonography using Logiscan 128 in standing or dorsal recumbency. The paper documents detailed etiology, feeding habits of calves under Kashmir conditions, ultrasonsgraphy findings, chemical analysis of calculi, preventive measures suggested and treatment instituted.

RS 48: Reconstructive Surgery in Ruminants- A Review of 6 Cases

R. Siva Shankar, Ravi Sundar George, **M.S. Sabarish Babu,** N. Krishnaveni, Nitin J.D. Souza and A. Arun Prasad
Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai (T.N.)

A total of 6 cases which warranted reconstructive surgery were studied. Extensive skin loss in the inguinal region in a day old calf which could not be apposed in conventional manner was reconstructed with flank fold advancement flap. A congenital oro-nasal fistula in a kid which showed symptoms of milk draining through nostrils after intake of milk, autogenous fascia lata graft was harvested and sutured to the hard palate to close the defect. Traumatic wound in the mandibular region in a goat was reconstructed by buccal fold flap to close the defect. In case of atresia ani et recti, the animal was operated previously by a local vet outside and had stricture formation in the anal area which was reconstructed to relieve the stricture. Another 2 cases included extensive teat laceration which was managed with silicone implant stents and apposed with polyamide. Post operatively antibiotics and analgesics were administered for five days intravenously. Out of six cases, rectal stricture had complications and other cases recovered uneventfully.

RS 49: Surgico-Clinical Management of Ocular Affections in Bovines

M. Saibaba, N. Dhana Lakshmi, M.S.S.V. Phaneendra, Ch. MallikarjunaRao,
K. Sudarshana Reddy, K. Manoj Kumar and D. Vilaya Kumari
Department of Surgery and Radiology, College of Veterinary Science, Tirupati (A.P.)

The study was conducted on 21 clinical cases presented to the college hospital with various eye affections in bovines during a period of one year. Eye cancers were surgically excised under Peterson's eye block and auriculopalpebral nerve block. On histopathology of removed masses, the incidence of squamous cell carcinoma was more. Ocular dermoids seen as unilateral skin growths were excised under retrobulbar nerve block. Cases like traumatic injuries of eye, pterygium, foreign body and worm in the eye were successfully managed surgically. Other affections like corneal opacity, chemosis, hyphema and hypopion were treated symptomatically by local and systemic drugs. Symptoms, treatment regimens and outcome of all cases are discussed.

RS 50: Screening as Stone and Non-Stone Former: a Diagnostic Tool for Occurrence of Urolithiasis in Young Calves

Gazalla Siraj, D.M. Makhdoomi, Mohsin Gazi, M.A. Ganai, G.N. Sheikh,
Md. Moin Ansari and Rafiq Ahmad Shah
*Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry
SKUAST, Srinagar (J.&K.)*

A total of 24 calves were subjected to screening as stone and non stone former. The urine samples were stored using thymol as preservative. Screening was done within 24 hours using urine analyser. The urine samples from all the animals that were included in the study were screened for the presence of crystals. Our study revealed that 29.1% as non-stone former 70.8% as stone former. From our study, it was concluded that feeding composite ration to the animals at pre- ruminant stage is the only cause of urolithiasis in Kashmir region which is manifested by high urinary phosphorous, high crystal count in the urine over the period of study. Feeding of composite ration was aggravating factor and surgery proved relieving factor.

RS 51: Standardization of Medial Patellar Desmotomy Technique in Standing Position of Buffaloes

A.K. Bishnoi, Y.P. Singh, M.C. Parashar, Pradeep Kumar, S.M. Qureshi, Raj Kumar, and Nazneen Atwal
Department of Veterinary Surgery and Radiology, CVAS, Navania, RAJUVAS (Rajasthan)

Total 74 medial patellar desmotomies (MPD) were performed in standing position of 44 cases of buffaloes diagnosed with upward fixation of patella during the one year period. The animals were properly restrained in standing position in the travis towards the side of affected limb. A skin bleb was created by depositing the local anaesthetic agent intradermally at the site of surgical blade insertion just above the anterior tibial tuberosity in the groove between the anterior and medial patellar ligaments. Also, intraligamentous anaesthetic infiltration was done at the surgical resection site of the medial ligament. Surgery was performed by closed method of MPD using surgical blade # 11 or 20. Surgical haemorrhage was noted as minor, moderate and absent in 78.57%, 17.14% and 4.28% cases, respectively. Uneventful MPD with minimum time of restraining, anaesthesia and surgical procedure was achieved in the cases of present study.

RS 52: Successful Surgical Management of Umbilical Hernia Complicated with Rumenal Fistula in a Holstein Friesian Calf

A.S. Patil, Ramesh Rathod, B.N. Nagaraja, L. Ranganath and M.S. Vasanth
Veterinary Hospital, College of Agriculture, UAS, Dharwad (Karnataka)

A seven month old HF calf was presented to the Veterinary Hospital, UAS Dharwad, Karnataka with a history of umbilical hernia by birth and leakage of ingested food materials from the swelling since eight days. On clinical examination, animal had umbilical hernia and rumenal fistula, was dehydrated and cachectic. Following fluid therapy, the surgical correction of rumenal fistula followed by umbilical herniorrhaphy was taken up under xylazine premedication and local analgesia with ring block infiltration using lignocaine HCl in dorsal recumbency. The rumen was trimmed and closed by double layer of inverted sutures (Cushing's) using Polyglactin - 910 suture no 2. The peritoneal cavity was lavaged with NS + streptopenicillin followed by Metronidazole. The abdomen wall defect was closed by horizontal mattress sutures and reinforced with closely placed simple interrupted sutures using Polypropylene no 1. A pressure bandage was applied around the abdomen with thick cotton cloth. The animal was maintained on parentral nutrition for three days along with a course of antibiotics and analgesics. The animal recovered uneventfully.

RS 53: Surgical Affections of Teat in Cows-A Clinical Study

Udayakumari, B., T.P. Balagopalan, N. Aruljothi and B. Rameshkumar
Department of Veterinary Surgery and Radiology, RGIVER, Puducherry (Pondicherry)

Cows presented to TVCC with surgical affections of teat for a period of one year were examined clinically and ultrasonographically to classify the lesions and the results of the study are presented. The incidence was 6.42% and among 76 teats affected, eighteen teats (1.5%) were diagnosed with external lesions and 58 teats (5%) with internal lesions. The major etiological factor observed was milking pattern and left fore teat was found to be affected more. The external lesions were lacerations (5), congestion (2), edema (2), vesicle (2), petichae (1), abscess (1), gangrene (1), cracks (1) dry scabs (1), webbed teat (1) and supernumerary teat (1). Internal lesions affecting gland and cistern (50) were classified into six types (Type I to VI) based on ultrasonographical evaluation. The occurrence in percentage was 15.78, 9.21, 26.31, 1.31, 6.57, and 6.57 % respectively. Lesions involving the teat sphincter/teat end were imperforate teat (1), narrow streak canal(2), dilated streak canal (1), callous teat end (1), keratinization of teat end (1), uIcerated teat end (1) and inverted teat (1).

RS 54: Surgical Management of Acquired Prepubic Hernia in Six Sheep

Khadim Hussain Dar, Shahid Hussain Dar, J.D. Parrah, Hakim Athar and Mehraj-U-Din Dar
Division of Veterinary Surgery and Radiology, FVSAH, SKUAST, Kashmir (J.&K.)

The present paper describes the surgical management of acquired prepubic hernia due to prepubic tendon

rupture in six sheep. The sheep were presented with the complaint of caudal abdominal swelling and reluctance in lying down. The animals were anaesthetized by lumbosacral epidural anaesthesia using 2% lignocaine hydrochloride @4.6 mg/kg body weight. Surgical repair was undertaken through a ventral midline incision made from the umbilicus to the pubis on the middle of the hernia and extended through skin and subcutaneous tissues in all the cases. In case of pregnant ewes through the same skin incision the uterus was exteriorised and 4 inch long incision was made on uterus for removal of foetus. Post operatively the animal was prescribed ceftriaxone twice a day and meloxicam once for five and three days, respectively.

RS 55: Surgical Management of Chronic Ruminal Fistula in a Buffalo

Y.P. Singh, M.C. Parashar, A.K. Bishnoi, Pradeep Kumar and S.M. Quereshi
Department of Veterinary Surgery and Radiology
College of Veterinary and Animal Science Navania, RAJUVAS (Rajasthan)

A Surti Buffalo aged 5 years was brought to the TVCC, CVAS, Navania with the history of a chronic fistulous wound at left flank region along with ingesta coming out of it. Further history revealed that animal was suffering from severe tympany one month before and was treated by a local practitioner using a big trocar and canula like instrument. Case was treated surgically by repairing the fistula after proper debridement under paravertebral anaesthesia Ruminal wall and muscles were sutured in different layers using chromic catgut No. 2 and skin wound was closed as routine manner. Buffalo recovered uneventfully within two weeks of time.

RS 56: Surgical Management of Coenurous (Gid) in an Adult Indigenous Goat

M.C. Parashar, Y.P. Singh, A.K. Bishnoi, Pradeep Kumar and S.M. Quereshi
Department of Veterinary Surgery and Radiology
College of Veterinary and Animal Science, Navania, RAJUVAS (Rajasthan)

An indigenous goat aged 4 years was brought to the TVCC, CVAS, Navania with a history of anorexia of last 3 days, head pressing against the wall and circling movement. On clinical examination softening of skull bone was noticed. Animal bleated after pressing the soft area due to pain. The case was suspected for Gid (Coenurous).The goat was treated surgically after preparation of site aseptically. Intact and complete cyst along with hundreds of scolices was removed after trephining the skull bone. Inj. Gentamicin 5 mg/kg B.Wt., Inj. Meloxicam 0.2mg/kb B.Wt. and Inj. Tribivet 3 ml I/M given for 7, 3 and 5 days respectively. The animal recovered uneventfully within two weeks of time.

RS 57: Surgical Management of Cutaneous Papilloma in a Goat

S. Kokila, P. Shankar, D. Vishnugurubaran, A.R. Ninu and R. Ram Prabhu
Department of Veterinary Surgery and Radiology,Veterinary College and Research Institute, Tirunelveli (T.N.)

A non-descript, one year old, female goat was referred to Teaching Veterinary Clinical Complex, Tirunelveli with the history of a wart in the flank for the past 20 days and increasing in size. On clinical examination mulberry like growths were seen in left flank region and near the dorsum of the lumbar vertebra. Animal was placed in lateral recumbency and the wart was surgically removed by local infiltration of 2% lignocaine. Owner was advised to give Thuja orally for 3weeks. No recurrence was reported till date.

RS 58: Surgical Management of Dorsal Patellar Luxation in Bovines by Closed Method-A Review of 112 Cases

N. Nagaraju, D.R. Manjunatha, B.R.Balappanavar and M.S. Vasanth
Department of Veterinary Surgery and Radiology, Veterinary College, Hassan (Karnataka)

A total of 112 bovine cases with dorsal luxation of patellar condition in and around Hassan district were surgically treated by closed method of patellar desmotomy in a period of 2 years (September 2012 to September 2014). In 75 animals, patellar desmotomy was done in casting position by closed method and 37 animals in standing position by closed method. In all the cases the medial patellar ligament was severed after aseptic preparation of site

and 2% lignocaine infiltration. In 109 cases the recovery was spontaneous, two animals recovered after one week completely and one animal recovered after 21 days. Medial patellar desmotomy by closed method was less time consuming, with least or no haemorrhage, immediate recovery and no need to rest the animal.

RS 59: Surgical Management of Oesophageal Foreign Body in Ruminants-A Review of Six Cases

R. Sivashankar, Ravi Sundar George, M.S. Sabarish Babu, Mohamed Shafiuzama, B. Justin William and A. Arun Prasad
Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai (T.N.)

A total of 6 cases of oesophageal foreign body (3 goats, 2 calves, 1 cow) were studied. The history reported by the owner was anorexia, regurgitation, excessive salivation, bloat and unable to swallow feed and water. Plain lateral radiograph of cervical region revealed radio opaque foreign body in the oesophagus. Anaesthetic protocol was selected on case to case basis for surgical intervention which included Ketamine and Xylazine (intravenously) as well as Xylazine (i/v) and Lignocaine (local infiltration). Oesophagotomy was performed through left lateral approach by making a longitudinal incision directly over the foreign body and recovering it by gentle squeezing. Fish hooks, phytobaezoar and trichobaezoar were found as commonly occurring oesophageal foreign bodies. The oesophagus was closed by in out and out in suture pattern by using PGA 1-0 suture material. The sternocephalicus muscles were re-apposed by simple continuous suture and skin by cross mattress suture pattern. Post operative care was done in routine manner. Out of six cases, 5 recovered uneventfully without any complications and one case died due to complications post operatively.

RS 60: Surgical Management of Extensive Interdigital Fibroma in Both Forelimbs in Sahiwal Cow

Raju Sharda, R.C. Ramteke, Sandeep Singh, N. Gopal and V. Meshram
Department of Veterinary Surgery and Radiology
College Of Veterinary Science and Animal Husbandry Anjora, Durg (C.G.)

A Sahiwal cow aged 4 years was presented for lameness and fibrous mass in the interdigital space in both forelimbs. The growth was visible about 5 to 6 months back and was gradually growing in size. The animal was unable to support weight for long period on forelegs and used to sit down at regular intervals. Clinical examination confirmed the firm growth as interdigital fibroma. Under proper digital nerve block, local interdigital infiltration and aseptic preparation of site the interdigital fibroma were removed surgically. Haemorrhage was checked by ligation and use of tincture benzoin Co. Post operatively, injection Intacef 3 gm (ceftriaxone), DNS 1500ml and multivitamin tribivet were given intravenously and meloxicam intramuscularly for five days. Antiseptic dressing with betadine ointment and topicure spray was done on alternate days till complete healing.

RS 61: Surgical Management of Obstructive Urolithiasis in a Male Ongole Calf-A Case Report

Devarathnam J., Deviprasad, V., Mahesh, R., Kamalakar, G., Sumiran, N. and Suresh Kumar, R.V.
Department of Surgery and Radiology, College of Veterinary Science, Proddatur (A.P.)

The present paper reports diagnosis and surgical management of a male ongole calf aged about 8 months which had complete obstructive urolithiasis. The animal was presented to the department of Surgery and Radiology with the history of complete urinary retention and anorexia. On clinical examination restlessness, increased pulse rate and congested mucous membranes were observed. Per rectal examination revealed fully distended bladder with no signs of rupture. Rectocentesis to give temporary relief to the animal was unsuccessful. Under local infiltration anesthesia, left flank laparotomy was performed to reach the bladder. A sterile Foley's catheter was introduced into the bladder through a tunnel made in the ischio rectal fossa. Post operatively ammonium chloride was given orally @ 200 mg/kg BID for 15 days. Catheter was left in place until the urination resumed through normal route. Animal recovered without any complications.

RS 62: Surgical Management of Ossifying Epulis in a Jersey Crossbred Cow

S. Dharmaceelan, K. Jayakumar and S. Senthilkumar
Department of Veterinary Surgery and Radiology, Veterinary College and Research Institute, Namakkal (T.N.)

A three year old Jersey crossbred cow weighing about 332 kg was presented with the history of a growth on the left mandibular region of the alveoli of the central, middle and lateral incisors and the right central incisor, gradually increasing in size along with difficulty in mastication for past one month. Clinical examination revealed hard growth with bleeding ulcers and foul smelling. Radiological examination revealed radio opaque mass with osteolytic changes that extended over the left half of the mandible up to the mandibular symphysis. Analgesia was achieved with local infiltration combined with mental nerve block using 2% lignocaine. An incision was made over the healthy area near the tumour mass and after reflecting the mucosa backwards, the tumour along with the bone involving the left central, middle and lateral incisors and right central incisor was removed along with the mandibular symphysis (Left Rostral Hemi-mandibulectomy) using the electric cast cutting saw and haemorrhage was controlled using the electrocautery. Absorbent gelatin sponge was applied over the wound surface and the mucous membrane was sutured using cotton thread. Post operatively the animal was maintained on intravenous fluids, antibiotics and analgesics for three days and then gradually regular feed was introduced. Wound management was carried out for the next ten days. The animal consumed feed and water normally. The animal was discharged on the tenth post operative day. Histopathological examination of the tumour revealed ossifying epulis.

RS 63: Surgical Management of RDA in a Crossbred Jersey Cow-A Case Report

Mehraj u din Dar, Nazir Ahmad Changal and Tawheed Najar
Division of Veterinary Surgery & Radiology, FVSAH, SKUAST-K (J.&K.)

A primiparous crossbred jersey cow aged 4 years parturated normally one month back. 15 days after the parturition, the cow developed anorexia which was treated by a local vet by conservative method and animals was alright for next 15 days. The cow was then presented with a history of inappetence, selective feeding of roughages and hypogalactia. The cow was treated for primary ketosis, hypocalcaemia and indigestion but didn't respond to the medical treatment. Right side auscultation between 8-13th rib revealed ping sound and positive liptek test confirmed the diagnosis. Upon right sided laprotomy, the abomasums was found right beneath the incision. The abomasums was decompressed and brought to the normal site. To prevent the reoccurrence, abomasopexy was done. The laparotomy incision and skin was closed in a routine manner. The animal recovered uneventfully.

RS 64: Surgical Management of Rumen Fistula in Heifer

Abas Rashid Bhat, Santhi Jayalekshmi, Sarit K. Patra , Anwarul Hassan and Shabir A.
Division of Surgery, IVRI, Izatnagar (U.P.)

A 2 year old non descript heifer was presented with the history of trauma 10cm long parallel to the vertebral column on left paralumbar fossa 5 days before the clinical presentation. The rumen contents were coming through the opening due to fistula formation. Under local infiltration by lignocaine 2% rumen wall adhesions with abdominal wall were removed .Fistula was freshened by trimming and closed by catgut by Lambert pattern. Abdominal muscles edges were trimmed to provide strength to suturing as muscle edges were necrosed. Skin was closed in horizontal pattern by silk and excess skin was removed. Postoperative daily antiseptic dressing, with antibiotics and analgesics were prescribed. After 9 days post operation skin sutures were removed.

RS 65: Surgical Management of Ruminal Foreign Body in Goats- A Review of Six Cases

R. Siva Shankar, Ravi Sundar George, M.S. SabarishBabu, **P. Manoj Prabhakar,**
B. Justin William and G. Jishnu Rao
Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai (T.N.)

A total of 6 cases of goats presented for rumenotomy or exploratory laparatomy with the history of recurrent

abdominal distension, anorexia, lack of rumination and diarrhoea were presented. Abdominal palpation revealed a hard mass suspected for foreign body. The rumen motility was reduced and the rumen pH was towards acidic side. Plain radiography revealed radio opaque foreign body in the rumen. Tetanus toxoid was administered prior to surgery. Rumenotomy was performed under regional anaesthesia with paravertebral nerve block and inverted L block. Foreign bodies like indigestible plastic ropes, sand and metallic objects in the form of rags were removed successfully. Cud transplantation was done in all the cases to enhance rumen motility after surgery. Post operative care was done in routine manner. Out of six cases 4 recovered uneventfully after surgery without any complications. One case developed wound dehiscence due to self mutilation and one died due to toxaemia.

RS 66: Surgical Management of Severe Dog Bite in a Calf-A Case Report

Ravendra Singh, J. Khurma, and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science
RAJUVAS, Bikaner (Rajasthan)

A 1 month old calf was presented to TVCC, RAJUVAS, Bikaner with a history of right forelimb dog bite during night hours before clinical presentation. Clinical examination revealed a deep bite wound involving humerus of right forelimb. The calf was sedated using Xylazine (0.1mg/kg b.wt. IM) and restrained properly. The wound was closed in routine manner as muscles were sutured using catgut No.1 in continuous pattern and skin was sutured using silk in horizontal mattress pattern after placing a draining tract. Postoperatively, broad-spectrum antibiotics Cefstan (Ceftriaxone and sulbactum, 5-10mg/kgb.wt.IV for 7 days) and NSAIDS (Meloxicam, 0.5mg/kgb.wt. IM for 3 days) were administered. The calf recovered uneventfully.

RS 67: Surgical Management of Subconjunctival Abscess in Calves-A Report on Three Cases

Balagopalan,T.P., N. Aruljothi and B. Ramesh Kumar
Department of Veterinary Surgery and Radiology
Rajiv Gandhi institute of Veterinary Education and Research, Pondicherry (T.N.)

Three cases of subconjunctival abscess in jersey cross bred calves of 1-2 months of age reported to TVCC. All the calves were showing conjunctivitis, blepharospasm and epiphora without any history of trauma. Ophthalmic examination revealed swelling of the third eyelid with soft palpable mass projected towards the cornea. It was bilateral in nature in one calf. Under auriculopalpaberal and Peterson's block using 2% Lignocaine hydrochloride solution, the eye was prepared for aseptic surgery. A small stab incision was made on the swelling and thick inspissated pus was evacuated. Povidone 0.1% solution was used to irrigate the cavity. The cultural examination of the pus revealed Streptococcal organism and the antibiotic sensitivity test showed sensitivity to Chloramphenicol and Ciprofloxacin. Topical application of Chloromycitin eye applicaps was advised for 7 days post-operatively and all the animals showed complete recovery.

RS 68: Surgical Management of Traumatic Evisceration in a Local Ewe

J.D. Parrah, **Khadim Hussain Dar** and Hakim Athar
Department of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry
SKUAST-K, Srinagar (J.&K.)

A 3 year old local female sheep weighing 37 kg was presented with protrusion of abdominal viscera through right ventrolateral abdomen due to butting of a bullock 3 hours ago. The animal was administered xylazine hydrochloride @ 0.03 mg/kg body weight intramuscularly (IM). Ten minutes later lumbosacral epidural anaesthesia was induced using 2% lignocaine hydrochloride (4.5 mg/kg). The animal was restrained in left lateral recumbency on soft bedding. The protruded mass was covered with a sterile moist towel and the cutaneous area surrounding the abdominal rent prepared for aseptic surgery. The bleeding points were ligated using No. 2-0 chromic catgut. The

eviscerated portion of the intestines and mesentery were carefully pushed into the abdominal cavity and the edges of the abdominal rent debrided. Postoperatively, ceftriaxone (0.5 g, BID, IM) and meloxicam (0.2mg/kg, OD, IM) were prescribed for five and three days, respectively. Antiseptic dressing using 5% povidone iodine was continued twice daily till suture removal on day 12th.

RS 69: Surgical Management of Traumatic Reticulo-Pericarditis in a Pregnant Cow

Srinivasa Murthy K.M., Nagaraja, B.N., Ranganath L. and Anil S. Patil
Veterinary College, KVAFSU, Bangalore (Karnataka)

Three years old, HF cross breed cow with eight months pregnancy was presented with the complaint of not taking food, not ruminating, brisket edema and not responding for medical treatment. Physical examination revealed distended jugular veins, doughy rumen and scanty dung in the rectum. Auscultation revealed cluck sounds at the diastole. Pericardiocentesis showed straw coloured fluids. The haematology revealed elevated leucocytes and neutrophils and was tentatively diagnosed as traumatic reticulopericarditis. Upon exploratory laparorumenotomy, it was confirmed as reticulitis with adhesions of reticulum to diaphragm. The reticular adhesions were released. No diaphragmatic hernia or foreign body was found. The thoracotomy through left fifth rib resection revealed pyothorax and pericarditis with thick fibrosed pericardium. During pericardectomy an eight centimeter long metallic wire could be isolated from the pericardium. The thoracic cavity was lavaged and tube drainage was provided. The regular lavage with normal saline diluted with liquid dimethylsulfoxide could stop the secretions. Finally the tube drain was removed. The animal recovered uneventfully and delivered a male calf normally after a month. The traumatic reticulopericarditis in a pregnant cow was managed successfully by exploratory laparotomy and pericardectomy through thoracotomy.

RS 70: Surgical Management of Urethral Diverticulum in Goats-A Report of Four Cases

Devarathnam, J., Bharathi, S., Sivasudarshan, L., Mahesh, R., Kamalakar, G., Sumiran, N., Deviprasad, V. and Suresh Kumar, R.V.
Department of Surgery and Radiology, College of Veterinary Science, Proddatur (A.P.)

The present paper reports such case of urethral diverticulum in four goat kids. Four male goat kids ranging in age between 2-3 months, were presented to the Department of Surgery and Radiology with the complaints of swelling on the ventral portion of penile shaft along with inappetence, depression and stranguria. Clinical examination revealed narrow urethral orifice and presence of penile urethral diverticulum 3 cm caudal to the prepucial orifice in all the four animals. Urine was voided from the external urethral orifice when the swelling was manually compressed. Urethral catheterization attempts were unsuccessful in all the four cases. Penile urethral diverticulectomy was performed by the guidance of urethral catheter under xylazine sedation (0.2 mg/kg) IM and local anesthesia using 2% lignocaine. Urethral lumen was reconstructed with polyethylene catheter followed by snipping of narrowed urethral process. Urethral orifice healed and urethral lumen remained patent without any complication in all the kids which were observed postoperatively for six months.

RS 71: Surgical Management of Urinary Obstruction in Young Ruminants by Tube Cystotomy-A Report of 21 Cases

P. Ravi Kumar, M. Raghunath, P. VidyaSagar, N.V.V. Hari Krishna, B. Sailaja and V.S.C. Bose
Department of Veterinary Surgery and Radiology, NTR College of Veterinary Science, Gannavaram (A.P.)

A total of 21 young male calves were presented to the Department of Veterinary Surgery and Radiology with a complaint of complete/partial urinary retention out of which 10 (47.6%) were ongole calves and 11 (52.4%) were graded Murrah calves between 1 to 6 months of age. Ten calves were presented with cystorhexis and uroabdomen along with severe dehydration. All the animals were stabilized with intravenous fluid therapy and were operated on the same day under light sedation and local infiltration anaesthesia. After left paramedian laparotomy, Foleys catheter was used to perform tube cystotomy. Postoperatively the calves were given with urinary acidifiers orally to neutralize

the highly alkaline Ph of urine. The calves started passing urine normally through the natural orifice after 10-15 postoperative days at which stage the catheters were removed. The clinical outcome and complications will be discussed.

RS 72: Surgical Repair of an Extensive Lacerated Wound in a Surti Buffalo

Y.P. Singh, M.C. Parashar and S.M. Quereshi
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science, Navania RAJUVAS (Rajasthan)

A Surti Buffalo aged 5 years was brought to the TVCC, CVAS, Navania (Udaipur), with a fresh extensive lacerated wound on its back at thoracic region. Wound was accidentally occurred by an iron sheet (Tin shed) during a huge wind storm. Size of wound was twelve inches long and two and half inches deep including fracture of spine also. After proper cleaning wound and removal of dirt and debris, muscle were sutured by using chronic cat gut no. 2 in two layers and skin wound was sutured as routine manner. Inj. Dicrysticin 5.0 gm and Inj. Meloxicam 0.2mg/kg I/M given for 7 and 3 days, respectively. The animal was recovered uneventful.

RS 73: Surgico-Therapeutic and Immunological Management of Bovine Cutaneous Papillomatosis

A.U. Hareesh, D. Rani Prameela, M. Saibaba, M.S.S.V. Phaneendra, P. Veena and N. Dhana Lakshmi
College of Veterinary Science, SVVU, Tirupati (A.P.)

Total of 15 cattle were reported with bovine papillomatosis, with age range from 8 months to 5 years. On examination, the animals had multiple papillomas varying in size from 0.5 to 60 mm in diameter, disseminated on face, neck, udder and perineal region. In six animals, few growths were removed for the preparation of an autogenous vaccine and the vaccine was administered @ 1ml/20 kg bodyweight intra dermally. Auto- haemotherapy was done in all cases with 10 ml of venous blood of same animal was injected subcutaneously on weekly intervals for four weeks. Homeopathic medicine Tincture Thuja was injected s/c for 3 cases. The animals recovered uneventfully within one month. Autogenous vaccine is useful for therapeutic purpose in bovine papillomatosis and auto–hemotherapy can serve as a useful adjunct by enhancing regression rate of papillomas.

RS 74: Evaluation of *Iris ensata* as a Litholytic Herb for Prevention of Obstructive Urolithiasis in Calves

Gazalla Siraj, D.M. Makhdoomi, Mohsin Gazi, M.A. Ganai, G.N. Sheikh, Md. Moin Ansari and Rafiq Ahmad Shah
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry SKUAST-K (J.&K.)

Iris ensata has traditionally been used to feed the animals postpartum or especially to the animals reared in city ahead of the sacrifice during Eid. A report on *Iris ensata* found to be effective in treating urolithiasis exists in literature. Therefore, we investigated the crude extract of *Iris ensata* for possible antiurolithic effect, to rationalize its medicinal (curative or prophylactic) use. Aqueous and alcoholic extracts in concentration of 5, 10 and 20% were made conventionally and incubated at 37°C in an incubator and the calculi harvested were kept in the solution for demineralization for a period of 10 days with periodic shaking. The extracts were subjected to estimation of calcium, magnesium and phosphorous before and after demineralization of calculi. The 10% ethanolic extract was found to be best one to show litholytic activity in-vitro. Thus, this is first in-vitro trial of its kind which was extended in-vivo under clinical situation in calves suffering with obstructive urolithiasis.

RS 75: Litholytic Efficacy of *Iris ensata* for Management of Obstructive Urolithiasis in Calves: An *in vitro* Study

Gazalla Siraj, D.M. Makhdoomi, Mohsin Gazi, M.A. Ganai, G.N. Sheikh,
Md. Moin Ansari and Rafiq Ahmad Shah
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry, SKUAST-K (J.&K.)

The calculi collected from clinical cases during surgery were dried, weighed and incubated in six different solutions (5% aqueous, 10% aqueous, 20% aqueous, 5% alcoholic, 10% alcoholic, 20% alcoholic solutions) for 10 days at 37°C with periodic shaking. The results from in-vitro study showed excellent litholytic activity by 10% alcoholic solution. Keeping in view the result of study, animals ((n=24)) suffering from urolithiasis and animals screened positive for urolithiasis were offered 10% alcoholic solutions orally @ 15 ml/ kg body weight once daily for 8 weeks. The screening of animal for the recurrence of urolithiasis was done at 2, 4, 6 and 8th week. The Fishers test revealed that after 2 weeks of the administration of the extract, treatment had significant effect ($p < 0.03$). At 4 week $p = 0.0349$ implies that treatment had significant effect ($p<90.05$). At 6 weeks p value was 0.0135 indicating that the feeding of extract to the animals for 6 week had highly significant effect. At 8th week $p=0.015$ indicating that the treatment had highly significant effect. The same observation was recorded under clinical situations wherein the animals showed a declining trend of the recurrence of urolithiasis.

LARGE ANIMAL SURGERY POSTER SESSION

No. of Abstracts	**:**	**21**
Chairman	**:**	**Prof. Muzamil Hoque**
Co-Chairman	**:**	**Dr. DhanaLaxmi**

PSL 1: A Case of Congenital Contractural Arachnodactyly (Fawn Calf Syndrome) in *Bos indicus* Cattle

Tapesh Mathur and Jitendra Rajoria
Rural Veterinary Polyclinic, Jaipur (Rajasthan)

A rare case of Congenital Contractural Arachnodactyly (CA) in 8 years old nondescript cow along with new born calf of age 10 weeks was reported in Rural Veterinary Polyclinic, Hingonia, Jaipur. Diagnosis was done by physically examining the calf. In CA, the limb joints cannot be straightened out (extended) to the normal extent mostly the stifle and hock joints. Newly born calf died after 12 weeks of age due to inability to stand to suckle.

PSL 2: An Extensive Tongue Laceration in a Bullock-A Review of 2 Cases

Nagaraju, N., Manjunatha, D.R., Basavaraj Balappanavar, Srinivasmurthy, K.M. and Vasanth M.S.
Department of Veterinary Surgery and Radiology, Veterinary College, Hassan (Karnataka)

A 2.5 year old Hallikar bullock and 5 year old Jersey cross cow were presented with a history of extensive laceration of tongue. The tongue was sutured using 1-0 polyamide using Xylazine, Butrophanol and Ketamine combination @ dose of 0,01mg/kg, 0.02mg/kg and 0.04mg/kg respectively along with local infiltration.. The owner was asked to feed liquid food for a week. The sutures were disrupted after 2 days with wound dehiscence. Again the tongue was sutured with polyglycolic acid using interrupted sutures. Both animals were given a course of antibiotic for one week. Wound healed completely.

PSL 3: Congenital Urinary Bladder Defect and its Surgical Management in a Mule Colt: A Case Report

Yoginder Sangwan, Aditya Sharma and A.J. Singh
RVC Officers, Indian Army

A 5 days old foal was presented with a history of showing signs of colic with kicking and pain in the abdomen and the foal was dull. The animal was given treatment for colic to which it responded, but distention on ventral aspect of the abdomen kept on increasing. The animal was closely observed for its fecal and urine output, but it did not urinate and abdominal distention increased further. On physical examination and abdominal ballottement it was noticed that there was fluid filled in the abdominal cavity, the animal trying to urinate but was unable to do so. The animal was catheterised to remove urine but there was no urine output and the animal remained recumbent most of the time. In instant case also, the recovery was immediate with normal urine flow post surgery with no complications after wards.

PSL 4: Dicephalic Monstrocity in a Cow

D.M. Makhdoomi, Md. Moin Ansari, B.A. Moulvi, M.A. Gazi and Rafiq Ahmad Shah
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry SKUAST-K (J.&K.)

A three and half year old cow in first parity with normal gestation showing prolonged labour pain was presented to the university hospital. It started straining since last 8 hours. On obstetrical examination revealed a crano-iophagus dicephalic foetus with both heads joined at 45° to each other in anterior longitudinal presentation. The heads were lying against maternal pelvic brim. Attempts adopted to relieve dystocia by mutation and forced extraction with adequate lubrication of birth passage was unsuccessful to deliver the foetus. Hence caesarian section was undertaken. An incision 35 cm long was made on the left lower flank and part of uterus was exteriorized to deliver the live female dicephalic monster which succumbed to death after few minutes. The animal was given 1.5 liter of normal saline solution intravenously during and post operation. Antibiotics (Inj. Dicrysticin-S, 5g) and supportive therapy (inj. Livogen, inj. Novalgin, inj. Avil) were administered intramuscularly for five days. The heads were fused in the

occipital region. Each head had two eyes which showed nystagmus and medial strabismus. The neck, thorax, abdomen and limbs were grossly normal. The condition could be classified as dicephalic, distomus, tetraopthalmous, dipus, dibrachis monster.

PSL 5: Efficacy of Extract of *Iris Ensata* in Preventing Recurrence of Urolithiasis in Calves Pre- and Post-Surgery

Gazalla Siraj, D.M. Makhdoomi, Mohsin Gazi, M.A. Ganai, G.N. Sheikh,
Md. Moin Ansari and Rafiq Ahmad Shah
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry
SKUAST-K (J.&K.)

A local herb *Iris ensata*was used to ascertain litholytic activity and to find out its efficacy for recurrence and treatment of urolithiasis in animals. The dried herb material was grinded and extraction method followed as per the standard methodology. After the extraction, the aqueous and alcoholic extract of *Iris ensata* were collected and used for making six different solutions (5% aqueous, 10% aqueous, 20% aqueous, 5% alcoholic, 10% alcoholic, 20% alcoholic solutions). The calculi harvested after surgery were dried and known quantity was incubated in the six solutions of above mentioned concentration for 10 days in 37°C in hot air oven with constant shaking.. In present study the results revealed that both aqueous and alcoholic solution concentrations (5, 10 and 20%) showed litholytic activity however the activity was significantly ($p<0.05$) higher in 10% alcoholic solution. The results were compared for dissolution of calculi by estimation of minerals both pre and post dissolution period.

PSL 6: Unusual Gastrointestinal Foreign Bodies in Ruminants

A.K. Gupta, D.K. Dwivedi, R.B. Kushwaha, M.S. Bhadwal, P. Gupta and Ankur Sharma
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry
SKUAST, Jammu (J.&K.)

The present paper presents two cases of very unusual gastrointestinal foreign bodies, one in a cow calf and another in a cross bred cow in her first lactation, causing oesophageal and intestinal obstruction, respectively. The history, clinical findings, diagnosis and management of the cases would be presented.

PSL 7: Haemetological and Histopathological studies in cattle suffering from Eye Tumors

M.S. Gami, J.J. Parmar, C.N. Patel, S.J. Parmar, T.P. Patel and P.B. Patel

In 10 cases of different eye tumors the physiological parameters *i.e.* heart rate, respiratory rate and rectal temperature ranged in normal physiological limits. Similarly no significant differences were observed in haematological parameters like haemoglobin, packed cell volume, total erythrocyte count and differential leucocyte count whereas significant decrease observed in total leucocyte count at 10th post-operative days. All the tumorous growth collected from affected ten cases of eye tumor revealed squamous cell carcinoma in nine cases and chronic inflammatory reaction in one case.

PSL 8: Seedy Toe and its Surgical Correction : A Case Report

Yoginder Sangwan
54 Advance Field Veterinary Hospital

A 3 years old pony was presented with a history of seedy toe not responding to conservative treatment. The polo pony was out of polo since then. The dead horny tissue strapped off after nerve block of the area. Maximum possible dead tissue removed on regular interval. The animal returned to active polo after a gap of 3 ½ years.

PSL 9: Rudimentary Head-Case Report of Rare Congenital Anomaly in New Born Cross Bred Jersey Calf

Mohd Younus Mir
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry SKUAST-K (J.&K.)

A two month old cross bred jersey calf weighing 40 kg was presented for treatment, with the complaint of constantly growing abnormal structure on the left side of the normal head. The structure started growing since birth of calf and had achieved a reasonable size at the time of presentation. A thorough physical examination of the congenital anomaly was conducted. No communication of normal oral cavity with the anomaly was observed. The physical examination and exhibition of certain physiological characteristics of the structure revealed a case of true rudimentary head. The calf was prepared and subjected to surgical excision of the abnormal structure under local anesthesia. Postoperatively broad spectrum antibiotic and analgesic was prescribed for period of 5 days and 3 days respectively. The calf was monitored for one year and there was no recurrence of the anomaly.

PSL 10: Successful Repair of Avulsion Fracture of Olecrenon Process of Ulna by Tension Band Wiring Technique in a Khillar Heifer

Dilipkumar, D., Bhagavntappa, B., Shivapraksh, B.V., Jahangir, D. and Basavaraj, M.
Department of Surgery and Radiology, Veterinary College, Bidar (Karnataka)

A Khillar heifer of three year old had an injury at the elbow joint due to falling in a pit was presented to Department of Surgery and Radiology, Veterinary College, Bidar for treatment. The clinical signs shown by the animal were not bearing weight, flexion of fetlock joint and lameness while walking with the affected left forelimb. On clinical examination of the affected limb at the elbow joint had swelling and pain on palpation. The radiological examination revealed avulsion fracture of olecrenon process of ulna. The animal was prepared aseptically under general anesthesia using propofol as induction agent and maintained with isoflurane. The fractured fragments were reduced and anchored by tension band wiring technique. Lateral approach was used. After surgery the limb was immobilized with reinforced bamboo splints with plaster of paris for one month. The proper post-operative care with antibiotics and analgesics the animal made uneventful recovery.

PSL 11: Surgical Correction of Eviscerated Rumen in a Zebu Cattle: A Case report

Ravendrasingh, J. Khurma, Diler Singh and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science RAJUVAS, Bikaner (Rajasthan)

A 6 year old Zebu cattle was presented to TVCC, RAJUVAS, Bikaner with a history of 12 cm long deep lacerated wound with exposed mass by tin shed during pasture feeding two hours before clinical presentation. Clinical examination revealed exposed mass as a rumen. The cattle was restrained properly in right lateral recumbency. Surgical site was prepared aseptically and debris washed away with the help of normal saline solution. The wound was closed in routine manner as peritoneum and muscles sutured using catgut No.1 in continuous pattern and skin sutures using silk in cross mattress pattern after linear local infiltration with 2% lignocaine HCL. Postoperatively, Broad-spectrum antibiotics Cefstan (Ceftriaxone+sulbactum, 5-10mg/kgb.wt.IM for 5 days) and NSAIDS (Meloxicam, 0.5mg/kgb.wt. IM for 3 days) were administered. Suture line was cleaned regularly with clinical spirit for 10 days and sutures were removed on 10th day post-operatively. The cattle was recovered uneventfully.

PSL 12: Surgical Management of Accidental Burning in a Buffalo-A Case Report

J. Khurma, Ravendrasingh and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science, Bikaner (Rajasthan)

A 7 year old Murrah buffalo was presented to TVCC,CVAS, RAJUVAS, Bikaner with a history of accidental burning with fire involving neck, nostrils, shoulder region, posterior body parts, back and lateral abdomen. Clinical examination revealed dehydrated skin, decreased temperature (98°F) and increased pulse (95/minute). Hematological examination revealed low haemoglobin level (5.5 mg/dl). Zinc oxide and liquid Paraffin paste was applied over the burnt skin as a primary treatment. Secondary treatment involved regular fluid therapy with Normal Saline (7lt) and Ringer's Lactate (4lt) administered intravenously along with systemic administration of antibiotics (Amoxicillin, 10 mg/kg b.wt. IM b.i.d for 5 days) and analgesics (Meloxicam, 0.5mg/kg for 5 days) and Hematinic preparation (inj. Feritas 10 ml IM) was given on alternate days for 5 times with regular antiseptic dressing of wounds with Silver Sulphadiazine ointment. Buffalo recovered uneventfully in 3 weeks.

PSL. 13: Surgical Management of Certain Tumours in Cattle - A Report of 10 Cases

G. Kamalakar, J. Devaratnam, R. Mahesh, R.V. Suresh Kumar, V. Deviprasad and N. Sumiran
Department of Veterinary Surgery and Radiology, College of Veterinary Science Sri Venkateswara Veterinary University, Proddatur (A.P.)

Tumours are commonly encountered surgical conditions in large animals. A total of 585 cases presented to the clinic since one year were evaluated for tumours and tumour like lesions. 52 cases were diagnosed as tumours which comprised of papillomas (12), soft fibroma (9), hard fibroma (8), squamous cell carcinoma of horn (5), melanoma (5), occular melanofibroma (4), squamous cell carcinoma of eye (3), melanofibroma (2), osteochondroma (1), malignant histiocytosis (1), haemangiosarcoma (1) and scrotal lymphangioma (1). Diagnosis was based on gross, fine needle aspiration cytology, bihalving and histopathological studies. All the tumours were excised by aseptic surgery. Of these 10 different / special tumours (7 cutaneous, 1 osseous, 1 occular, 1 scrotal) are being presented here.

PSL 14: Surgical Management of Congenital Umbilical Defect with Visceral Eventration in a Cross-Bred Holstein Friesian Calf

D. Vishnugurubaran, A.R. Ninu, S. Kokila, M. Shiju Simon, P. Shankar and R. Ram Prabu
Department of Veterinary Surgery and Radiology,Veterinary College and Research Institute Tirunelveli (T.N.)

A day old HF cross-bred calf was presented with the history of protrusion of visceral organs through umbilicus since birth. On clinical examination the protruded mass containing abomasum, liver and intestinal loops covered by parietal peritoneum and the margin was continued with ventral abdomen skin. The calf was maintained with intravenous fluid @ 10 ml per kg body weight. The protruded mass was washed with normal saline. After aseptic preparation of surgical site, general anaesthesia was induced with intravenous propofol @ 6mg per kg body weight and anaesthesia was maintained with the same. The umbilicus was extended cranio-caudally and the protruded mass was reduced through the incision. The animal made uneventful recovery.

PSL 15: Surgical Management of Gunshot Wound in a Buffalo

Sandeep Saharan, Satbir Sharma, R.N. Chaudhary, Shrikant Sharma, Deepak Kumar Tiwari and Sandeep Kumar
Department of Veterinary Surgery and Radiology, College of Veterinary Sciences LUVAS, Hisar (Haryana)

A female buffalo was presented to Teaching Veterinary Clinical Complex with the history of gunshot wound at the right hock region on last night. Clinically, animal showed mild lameness with the affected limb. Plain radiography

was performed to determine the location of the bullet which was visualized on proximal aspect of hock joint lodged with in the muscles. Anaesthesia was achieved by administration of xylazine @ 0.1 mg/ kg b. wt. IV and local infiltration analgesia around the wound. Animal was restrained in the left lateral recumbency. Incision was given over upper hock region and bullet was removed by grasping with artery forceps. Animal attains normal gait on 7th post operative day and skin sutures were removed on 10th post operative day.

PSL 16: Surgical Management of Perineal Hernia in a Cross Bred Cow

R. K. Udehiya, P. Verma, Tarunbir Singh and J. Mohindroo
Department of Veterinary Surgery and Radiology, College of Veterinary Sciences
Guru Angad Dev Veterinary and Animal Sciences University Ludhiana (Punjab)

Perineal hernia is not frequently reported in cross bred cows. A cross bred cow aged 7 year was presented with history of trauma during mating with symptoms of retention of urine and marked swelling at right side of perineum. Urine was expressed through the urethral orifice on application of digital pressure on the swelling. Ultrasonography of the swelling revealed a large circumscribed anechoic structure suggesting presence of urinary bladder. The case was confirmed for perineal hernia with herniation of urinary bladder. Herniorrhaphy was carried out under posterior epidural analgesia. Intra-operatively, the urinary bladder was found herniated which was reposed back in to the abdomen and the pelvic diaphragm was repaired with poly-dioxanone in a continuous pattern. The animal was recovered uneventfully.

PSL 17: Surgical Management of Severe Dog Bite in a Calf: A Case Report

Ravendra Singh, J. Khurma and T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science
RAJUVAS, Bikaner (Rajasthan)

A 1 month old calf was presented to TVCC, RAJUVAS, Bikaner with a history of right forelimb dog bite during night hours before clinical presentation. Clinical examination revealed a deep bite wound involving humerus of right forelimb. The calf was sedated using Xylazine (0.1mg/kg b.wt. IM) and restrained properly. Surgical site was prepared aseptically and debris were removed with the help of normal saline solution and extra bone piece was cut using bone cutter. Post-operatively, Broad spectrum antibiotics Cefstan (Ceftriaxone and sulbactum, 5-10mg/kgb.wt.IV for 7 days) and NSAIDS (Meloxicam, 0.5mg/kgb.wt. IM for 3 days) were administered. The calf was recovered uneventfully.

PSL 18: Surgical Removal of Congenital Odentogenic Mass in a Calf: a Case Report

P. Sankar, Chhavi Gupta, M. Shiju Simon, S. Kokila, D. Visnugurubaran, A.R. Ninu,
R. Ramprabhu and S.Kathirvel
Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli (T.N.)

A two day old female cross bred Jersey calf referred to the Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli with the history of swelling in the oral cavity and suckling difficulty was observed since birth. Clinical examination of oral cavity revealed hard mass obstructing 2/3rd of the oral cavity and the hard mass attached to the hard palate. Haemato-biochemical examination revealed the results were within the physiological limits. Hard mass was excised under Diazepam @ 0.1mg/kg body weight intravenously and Propofol anaesthesia @ 4mg/kg body weight intravenously. Excised mass was sent for histopathological examination which revealed that this is a case of congenital odentogenic mass.

PSL 19: Surgical Treatment of Multiple Perivalvul Schwanoma in a Cross Bred Heifer

A.K. Maji, Suedenla Bhutia, Chandan Saha, V. Lalzawmliana, P. Das and S. Mahapatra
Department of Veterinary Surgery and Radiology, Faculty of Veterinary and Animal sciences
West Bengal University of Animal and Fishery Sciences, Kolkata (W.B.)

To treat a subcutaneous well defined tumour in a heifer. A cross bred heifer 1.5 years of age was operated for right ventral perivalvul deep subcutaneous well defined encapsulated mass. On histopathology it was diagnosed as schwanoma. The wound healed uneventfully without any recurrence at the site up to 6 months post-operation. Two months after operation at left ventral perivalvul region multiple chain like growth on a vertical line was operated. There was no recurrence.

PSL 20: The Evaluation, Diagnosis and Treatment of Ventral Abdominal Hernia in a Holstein Friesian Cow

D.M. Makhdoomi, Shahid Hussain Dar, Md. Moin Ansari, H.K. Bhatachhariya, Gazala Siraj and Rafiq Ahmad Shah
Division of Veterinary Surgery and Radiology, Faculty of Veterinary Sciences and Animal Husbandry
SKUAST-K (J.&K.)

A cow with seven and half month of pregnancy was presented in University clinics with the complaint of a ball like mass protruding at belly region since 20 days back. Per rectal examination revealed that whole uterus with fetus has sinked in the ventral abdominal floor and found painful thick edema in the abdominal floor extending to the xyphoid region. Animal was treated with PGF2á at the rate of 25mg/kg to terminate the pregnancy to avoid further complications. After 24 hours of treatment, animal started abdominal contractions, rupture of fetal bag and there was no progress in delivery that was confirmed as dystocia case. It was manually relieved by removing the fetus through birth canal. Fetus was live but the due to rupture of fetal placental attachments the blood mixed amniotic fluid was entered in its lungs and it was oozing from its nostrils. After half an hour fetus died due to asphyxia.

PSL 21: Traumatic Teat Laceration with Fistulation in a Cow and its Surgical Management

Shiju Simon, M.P. Sankar, Chhavi Gupta, R. Ramprabhu and S. Prathaban
Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli (T.N.)

A four-and-a-half year old jersey crossbred cow was brought with the history of teat injury at right forequarter with milk leaking from the injured site. The animal had calved twenty days back. Physical examination of the teat showed 80 per cent vertical cut and the lacerated wound (6 x 3 cm) extended into the teat, resulting in leakage of milk from the middle of the teat. The teat was soiled and swollen with the evidence of necrotic tissue at the tip of the teat. Ring block anaesthesia was induced by using 2% lignocaine hydrochloride followed by 10 % spray at the site. A three layer closure was performed using no. 3-0 PGA. The animal recovered uneventfully.

SMALL ANIMAL SURGERY
POSTER SESSION

No. of Abstracts	**:**	**17**
Chairman	**:**	**Prof. M.M.S. Zamma**
Co-Chairman	**:**	**Dr. A.M. Pawde**

PSS 1: Clinico-Histomorphological Studies on Certain Tumors in Dogs: A Report of 4 Cases

R. Mahesh, R.V. Suresh Kumar, V. Devi Prasad, J. Devarathnam, N. Sumiran and G. Kamalakar
Department of Veterinary Surgery and Radiology, College of Veterinary Science, Proddatur (A.P.)

The study envisages the incidence, clinical signs, hemato-biochemical and histopathological studies of different tumors encountered in dogs over a period of one year. All the tumors were diagnosed based on clinical signs and findings of fine needle aspiration cytology. No, abnormalities in hemato-biochemical parameters have been recorded in any of the case under study. Two lateral views of thorax and abdomen did not disclose any metastatic foci. Histomorphological findings revealed leiomyosarcoma of gums of mandible, fibrosarcoma of vagina, basal cell carcinoma at neck and fibroleiomyosarcoma at perineal region. All the animals were subjected for radical surgery of tumors following which they recovered uneventfully.

PSS 2: Surgical Removal of an Unusual Case of Cyst (*Coenurus gaigeri*) in a Sheep: A Case Report

P. Sankar, M. Shiju Simon, Chhavi Gupta, D. Visnugurubaran, S. Kokila, A.R. Ninu, R. Ramprabhu and S. Kathirvel

Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli (T.N.)

One year old Madras Red ram referred to the Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli with the history of swelling on the right shoulder region. Physical examination of the swelling revealed soft with fluid fluctuating mass. The fluid was drained through the needle aspiration. Sample sent for parasitological examination which revealed that it is a case of *Coenurusgaigeri*, is a larval stage of Taenia gaigeri, dog tape worm, which infects the muscles of goats and to a lesser extend in sheep. The cyst was surgically removed under 2% lignocaine anaesthesia.

PSS 3: Comparative Studies on the Clinical Management of Dog Bitten Wounds in Canine

Akshay Mohan, B. Ramesh Kumar and T.P. Balagopalan
Department of Veterinary Surgery and Radiology, Raijv Gandhi Institute of Veterinary Education and Research Puducherry (Pondicherry)

A comparative study for the clinical management of dog bitten wounds reported to DVSR, TVCC, Rajiv Gandhi Institute of Veterinary Education and Research, Pondicherry was carried out between March 2013 and October 2014. Out of 190 cases of dog bitten wounds reported during this period 18 cases of canine were taken up for this study. The animals were divided into 3 groups of six dogs in each group. All the animals were examined clinically for dog bitten wounds and the discharge from the wound was collected for ABST. The animals were subjected to the treatment of the dog bitten wound by cauterization with tincture iodine, application of povidone iodine and application of herbal chitosan polymer spray over the wound in group I, II and III, respectively. Ciprofloxacin was sensitive in 77% of the dog bitten wounds. Enrofloxacin and Cefpedoxime were sensitive in 11% of the cases. Ceftriaxone and Amoxicillin were found to be sensitive in 9% of dog bitten wounds and 3% of cases were sensitive to Cefotaxim. The Group I animals showed satisfactory healing without complications but animals showed irritation on drug application. Group II animals showed good wound healing with no complications and mild irritation on application of the drug was noticed and Group III animals showed excellent wound healing with no complications and animals did not show discomfort when the drug was applied.

PSS 4: Concurrent Bilateral Femur and Unilateral Tibia Fracture Repair in a Dog using Intramedullary Fixation Techniques

Satinder Pal Singh Saini, Simrat Sagar Singh, Tarunbir Singh, Vandana Sangwan and Narinder Singh Saini
Department of Veterinary Surgery and Radiology, GADVASU, Ludhiana (Punjab)

A 1 year old male mixed-breed dog weighing 26 kg was presented for severe bilateral hind limb lameness. Animal was recumbent when presented. History revealed accident trauma by a tractor-trolley. Upon physical examination and palpation, fracture of the right femur, right tibia and left femur were evident. Radiography was performed to confirm the site, location and severity of the fractures and to rule out the pelvic involvement. Both the femurs had comminuted fracture and tibia transverse fracture. Dog was operated under Butorphanol-Acepromazine-Glycopyrrolate, Propofol and Isoflurane combination anesthesia. Both the femur fractures were repaired using open intra-medullary interlocking nailing technique and tibia fracture was repaired using progressive intramedullary pinning technique successfully. Post-operative radiographs showed proper reduction and stable implant placement and fixation in all three fractured bones. Animal started bearing weight on all four legs, without assistance within one week of repair.

PSS 5: Correction of Proptosis by Tarsorrhaphy in a Rabbit

Shiju Simon, M. Chhavi Gupta, P. Sankar, R. Ramprabhu and S. Prathaban
Teaching Veterinary Clinical Complex, TANUVAS, Chennai (T.N.)

In rabbit (*Cryctolaguscuniculus*), the light sensitivity is eight times greater than that of humans. A six months old male rabbit was presented with the history of trauma (two hours before) followed by protrusion of left eye. Ophthalmic examination revealed menace and papillary reflexes were sluggish. Cornea was clear, orbital inflammation, episcleral congestion and epiphora noticed. The animal was anaesthetized using xylazine and ketamine @ 5mg/kg and 30mg/kg body weight intramuscularly. Then gentle retrograde pressure was applied on the eye by using a gloved index finger placed parallel to the corneal curvature to help return the globe to the orbit. A temporary tarsorrhaphy was performed (using stents) by taking a horizontal mattress suture through eyelid margin just anterior to gray line without tearing the lid margin by the non-absorbable suture material (nylon). Topical ophthalmic ointment chloramphenicol was smeared and advised to continue the ointment. Post-operatively systemic antibiotics and anti-inflammatory were given for five days. Suture was removed on 10th post-operative day and the globe retained inside the orbit. The neuro-ophthalmic examinations revealed menace, papillary reflexes returned to normal and Schirmer tear test value was 9 mm/min.

PSS 6: Cutaneous Hemangioma in a Bullmastiff Dog: A Case Report

D.N. Kelawala, S. Senthil Kumar, A.I. Sama, P.K. Rajput, A.K. Vala, P.V. Parikh, D.B. Patil and J.J. Parmar
Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry Anand Agricultural University, Anand (Gujarat)

A 4 year old castrated male Bullmastiff weighing 66 kg was presented with a history of huge tumorous growth in the right axilla since three and a half month. Palpation, clinical and radiological examination revealed hard mass involving deep penetration into the axilla. Ultrasound examination revealed heavy infiltration and was rich in blood supply. Histopathological examination of a small tissue from the growth under microscope appeared as un-encapsulated aggregates of closely packed, thin walled capillaries with endothelial lining and confirmed it as a benign cutaneous hemangioma. Bulk reduction of the tumor mass was conducted aseptically under general anesthesia taking care of all the major blood vessels and nerve supply. Tumor mass weighing 1.8 kg was removed successfully and the dog recovered uneventfully.

PSS 7: Ectopic Pregnancy in a Ewe

Mehrajuddin Naikoo, S.A. Dar and F.A. Sheikh
Teaching Veterinary Clinical Service Complex, Faculty of Veterinary Science and Animal Husbandry SKUAST-K (J.&K.)

Ectopic pregnancy indicates a pregnancy that takes place outside the uterus. This rare condition in animals can arise due to very specific causes, which can be broadly categorized into two types viz. primary and secondary causes. The former includes either the loss of an oocyte directly through the fimbria of an oviduct and is fertilized in the abdominal cavity and develops there, or a fertilized retrograde ovum enters the peritoneal cavity and becomes attached to the mesentery or abdominal viscera. In an accurate primary cause, placentation must exist on either a peritoneal or omental surface. In the present case, the pregnancy was of primary cause, wherein, both the oviducts and the uterine horns were intact and single dead and deformed ectopic foetus was attached to the abdominal viscera. The foetus was removed by caesarean section through right flank laparotomy and the ewe recovered completely

PSS 8: Fibrosarcoma of Oral Cavity in a Mongrel Dog: A Case Report

K.M. Srinivasa Murthy, N. Nagaraju, D.R. Manjunatha, B.R. Balappanavar and M.S. Vasanth
Department of Veterinary Surgery and Radiology, Veterinary College, Hassan (Karnataka)

A seven year old male dog presented with a history of swelling in the right maxilla region extending from premolar teeth to almost right orbital cavity since 7 months. The mass was granulomatous, slightly hard extending from first right premolar tooth up to orbital cavity and medially up to 1/3rd of unilateral hard palate. The mass was completely excised under 2.5% thiopentone general anesthesia and xylazine preanethesia and defect was reconstructed by covering buccal mucosa to hard palate using non absorbable suture. The animal was given antibiotic for 1 week and kept on liquid diet for 10 days. The wound healed uneventfully with no interference with prehension, mastication and deglutition. Histopathology of the mass revealed fibrosarcoma.

PSS 9: High Concentrate Rations as Probable Cause of Obstructive Urolithiasis in Small Ruminants

S. Adil, H.M. Khan, R.A. Pattoo and I.U. Sheikh
Division of Livestock Production and Management, Faculty of Veterinary Science and Animal Husbandry SKUAST-K (J.&K.)

The clinical obstructive urolithiasis in small ruminants of Kashmir valley is most frequently seen during winter months. These animals are confined to sheds during winters with limited access to the water and fed concentrate diets because of the non-availability of green fodders. High concentrate diets and low water intake cause supersaturation of the urine with excretory solutes resulting in the formation of calculus and subsequent obstruction to urinary outflow. Thus, dietary management is a key step for dissolution of calculi, prevention and management of the disease by decreasing the amount of excreted solutes in the urine. It may not replace the surgical procedure but helps in reducing the incidence of recurrence of uroliths.

PSS 10: Non-Odontogenic Oral Tumors in Dogs-Three Case Reports

V. Mahesh, S. Ravikumar and L. Ranganath
Department of Surgery and Radiology, Veterinary College, KVAFSU, Bengaluru (Karnataka)

In the present report, three dogs aged about 8 to 10 years were presented with a history of swelling of the cheek and drooling of blood stained saliva. On exploration of oral cavity, the tumour growth was found in the inner right cheek and in two cases even extending to the gums and surrounding lymph nodes. Under general anaesthesia, the tumour was excised in all the cases and sent for histopathology. The histopathology confirmed in two cases as squamous cell carcinoma and in one case as undifferentiated carcinoma.

PSS 11: Physiotherapeutic Rehabilitation of Dogs Suffering from Hind Quarter Weakness with Relation to Oxidative Stress and Antioxidant Status

Md. Moin Ansari, M.M.S. Zama, A.M. Pawde and M. Hoque
Division of Surgery, Indian Veterinary Research Institute, Izatnagar (U.P.)

The present investigation was designed to evaluate the oxidative stress / antioxidant status and efficacy of different physiotherapeutic modalities for early rehabilitation of 40 dogs (2.5 months to 13 years of age) of either sex suffering from hind quarter weakness presented to Referral Veterinary Polyclinic of Indian Veterinary Research Institute, Izatnagar. The dogs were randomly divided into 5 equal groups. The first grooup conventional drug therapy (CDT includes depomedrol, melonax, cyanocal-16, neurokind-G) alone (n=8) and in combination with different physiotherapeutic modalities viz. ultrasound (group II, n=8), short wave diathermy (group III, n=8), static magnetic field (group IV, n=8), interferential (group V, n=8). While another eight healthy dogs were used as controls. For oxidant level, Lipid Peroxidation (LPO) and antioxidant levels viz. Reduced Glutathione (GSH), Superoxide Dismutase (SOD) and Catalase (CAT) were evaluated in erythrocyte before and after 3,7,14 and 28 days of therapy. Dogs with HQW revealed LPO in terms of Malondialdehyde (MDA) production was significantly ($P<0.05$) increased as compared with healthy control on day 0. On day 28 post treatment, there was a significant ($P<0.05$) decreased in the level of LPO. Amongst antioxidant enzymes, activities of GSH and CAT decreased significantly ($P<0.05$) whereas, the level of SOD increased significantly ($P<0.05$) as compared to healthy control. On day 28, the dogs treated with short wave diathermy expressed minimum oxidative stress followed by those treated with ultrasound, interferential and static magnetic field.

PSS 12: Successful Management of Trans Articular Tibial Fracture in a Cat Using Epoxy Pin Fixation

Sarit Kumar Patra, Abas Rashid Bhat, Rashmi Singh, Deepash Gautam, Santhi Jayalekshmi, Swarupananda Sahu, H.P. Aithal and Rekha Pathak
Division of Surgery, Indian Veterinary Research Institute, Bareilly (U.P.)

A case of non weight bearing lameness was presented in a 2 year aged queen cat at RVP IVRI. On physical examination it exhibited crepitating sound with inflammation. Radiological examination revealed distal tibial fracture. Epoxy pin fixation was conducted under general anaesthesia (ketamine). Surgical site was prepared in a routine manner; fracture reduction was done by closed method. Subsequently by keeping the bone fragments in alignment, the pins (K-wires) were passed avoiding injury to major vessels, nerves and muscular attachments. Pins were directed perpendicular to the long axis of the bone, from caudomedial to craniolateral and from craniomedial to caudolateral direction, making it a hybrid external skeletal fixator. The pins in the same plane were bent towards the facture site. The bent pins were then joined with the help of adhesive tape to form a temporary scaffold. Using additional pin pieces, the two side bars of each side were joined at the proximal and distal ends. Epoxy hardener (M-seal) was applied. Post operative management was carried out in a routine manner (a course of antibiotics, analgesics, oral calcium and multivitamin with regular dressing of surgical site). Follow up examination (radiological and clinical) was conducted at 15 days interval .Pins were removed after 2 months post operatively following complete radiographic union. The animal recovered nicely with complete weight bearing.

PSS 13: Surgical and Medicinal Treatment of Vaginal Hyperplasia in 3 Bitches

A.K. Maji, Pintu Khan, Sanjay Goswami , P. Nag, P. Das and S. Mahapatra
Department of Veterinary Surgery and Radiology, Faculty of Veterinary and Animal Sciences
West Bengal University of Animal and Fishery Sciences, Kolkata (W.B.)

This work was to treat a separate type of prolapsed like vaginal mass in bitches which was not a CTVT or a

typical vaginal tumour. In a pug bitch 4.5 years of age, 10 kg of body weight suffering from vaginal fold hyperplasia in different estrous period undergone ovariohysterectomy elsewhere. Still it was having the same problems. Inj. Aquaviron (Testosterone) @ 1ml i/m was given at weekly interval at two occasions. The second patient was a mongrel bitch 2.5 years of age suffering from the same and treated in same way. The third bitch was a Labrador retriever weighing 35 kgs, one year of her age at estrous had same " popped out mass problem. At 2nd estrous uteropexy and vaginal repositioning had transitory effect as at 3rd estrous was also same problematic before presenting it to our University Clinics. Inj. Aquaviron tried twice but in vain. Ovariohysterectomy and vaginal mass amputation were done in two phases. All the bitches are now healthy and there is no recurrence and no estrous in third bitch. Proper ovariohysterectomy and vaginal amputation are the choice of treatment.

PSS 14: Surgical Correction of Congenital Entropion in a Cross-Bred Jamunapari Kid by Hotz-Celsus Procedure

Sooryadas S., **Joju Johns,** Dinesh P.T., Sarath K.S., Divya Suresh, Maruthi S.T. and Syam K. Venugopal
Department of Veterinary Surgery & Radiology, College of Veterinary & Animal Sciences
KVASU, Wayanad (Kerala)

A cross-bred Jamunapari kid (1 month of age) was presented with bilateral epiphora and blepharospasms commencing from one week of age and worsening progressively over the next few weeks. Clinical examination revealed entropion of upper and lower eyelids of both eyes. Corneal ulcerations with mild cloudiness were noticed in both eyes. The completely scrolled eyelids impaired vision. Hotz-Celsus procedure was performed on all affected eyelids. Topical ocular therapeutics was then followed. Follow up examination on tenth and thirtieth post-operative days revealed resolution of corneal ulceration, normal conformation of the eyelids and restoration of vision in both eyes.

PSS 15: Surgical Correction of Mammary Gland Adenocarcinoma in a Bitch-A Case Report

Ravendra Singh, J. Khurma, T.K. Gahlot
Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science
RAJUVAS, Bikaner (Rajasthan)

A 10 year old bitch was presented to TVCC, RAJUVAS, Bikaner with a history of a tumor like hard mass at abdominal region 10 months before clinical presentation which was increasing in size with time. Haematology examination revealed slight decrease Hb (10 mg/dl) and slight increased WBC count ($18x10^3/\mu l$). Histopathological biopsy examination revealed neoplastic proliferation with central coagulative necrosis that confirmed it as a malignant tumor. The bitch was anesthetized using Xylazine (1mg/kg b.wt. IM) and Ketamine (10mg/kg b.wt. IM) and restrained properly. Surgical site was prepared aseptically and tumorous mass excised. Postoperatively, Broad-spectrum antibiotics (Ceftriaxone, 20mg/kgb.wt.IV for 5 days) and NSAIDS (Meloxicam, 0.2mg/kg b.wt. IM for 3 days) were administered. The surgical wound healed without any complication.

PSS 16: Surgical Management of Cherry Eye in Male Bullmastiff Dog-A Case Report

Abas Rahid Bhat, Santhi Jayalekshmi, Irawati P. Sarode and Sarit Kumar Patra
Division of Surgery, IVRI, Izatnagar, Bareilly (U.P.)

Cherry eye is the protrusion of the gland of third eyelid which is most commonly seen in young brachycephalic dogs. A one year old male Bullmastiff dog (55Kg) was presented with history of sudden onset of pink mass at the medial canthus of both eyes. On clinical examination, prolapsed mass was congested with ocular discharge. The animal was showing severe irritation and trying to mutilate the mass. Based on history and clinical examination, this

case was tentatively diagnosed as prolapse of nicitans gland (cherry eye) and was planned for radical surgery. Animal was anesthetised as standard protocols under thiopentone general anaesthesia. Surgical correction of the prolapsed third eyelid gland was carried out using Morgan mucosal pocket technique. Two incisions where made on the posterior surface of the third eyelid, one on either side of the prolapsed gland. The two mucosal flaps formed, where sutured together over the gland using 4/0 polyglactin, pushing the gland down into the sub mucosal pocket. A simple continuous suture pattern was used, and the knot placed on the palpebral aspect of the nictitating membrane. Post operatively, the owner was advised to instill combination of tobramycin and flurbiprofen eye drops thrice daily for seven days. The animal made uneventful recovery within 20 days and cosmetic appearance was restored.

PSS 17: Surgical Management of Large Size Mammary Tumour in a Bitch

Satbir Sharma, Parminder Kour, Sandeep Kumar, Shrikant Sharma, Deepika Latther and Deepak Kumar Tiwari
Department of Veterinary Surgery and Radiology, College of Veterinary Sciences, LUVAS, Hisar (Haryana)

An adult female dog was presented to Teaching Veterinary Clinical Complex with the history of large size growth on ventral abdomen since last one month. Fine needle aspiration cytology and thoracic radiograph did not show metastasis. Therefore, it was decided to go for marginal excision of the tumourous mass. Animal was sedated with xylazine @ 1.1 mg/kg b. wt. and ketamine @ 11 mg/kg b. wt. IV. After excision of tumour mass, skin was sutured in horizontal mattress pattern. Tumour mass was round having 1.25 kg weight and 15 cm diameter. Antiseptic dressing of the wound with povidone iodine along with parental administration of antibiotics and analgesics for five consecutive days. Animal showed uneventful recovery and skin sutures were removed on 12th post operative day. Histopathology finding confirmed to be a case of adenocarcinoma.

FIELD VETERINARIAN AWARD

No. of Abstract : 01

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