

Eleventh Annual Convention
28-30 Oct, 1987

**DEPARTMENT OF SURGERY & RADIOLOGY
COLLEGE OF VETERINARY SCIENCE.
ASSAM AGRICULTURAL UNIVERSITY**

Guwahati, Assam,
INDIA





SOUVENIR

ELEVENTH ANNUAL CONVENTION
28-30 Oct, 1987

Department of Surgery & Radiology
College of Veterinary Science
Assam Agricultural University
Guwahati, Assam,
INDIA.

Executive Council

INDIAN SOCIETY FOR VETERINARY SURGERY

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	: Dr. P . O . George.

HEAD OFFICE

Deptt. of Surgery & Radiology
College of Veterinary Science
Haryana Agril. University
Hisar-125 004 (Haryana)
INDIA.



Press Secretary to the President
No. F. 2-M/87



President's Secretariat
Rastrapati Bhavan
New Delhi-110004
October 12, 1987

MESSAGE

Dear Professor Pathak,

The president of India is glad to learn that the Department of Surgery & Radiology, College of Veterinary Science, Assam Agricultural University, Guwahati, is organising a three-day National Symposium on "Surgical Management of foot disorders in farm animals in relation to production" and the 11th Annual Convention of the Indian Society for Veterinary Surgery from October 28-30, 1987. The president sends his greetings to the organisers and the participants and best wishes for the success of the Symposium and the Convention.

Yours sincerely,
(K. Suryanarayana)

Professor S. C. Pathak,
Convener, and Professor & Head,
Department of Surgery & Radiology,
College of Veterinary Science,
Assam Agricultural University,
Khanapara,
Guwahati-781022



1

Professor's address
New Delhi
October 1952

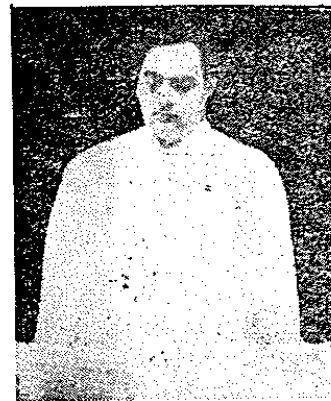
Dear Professor
No. 12/52

MESSAGE

The Ministry of Agriculture and Food, Government of India, is pleased to inform you that the Government of India has decided to award the title of 'Honorary Fellow' to you in recognition of your valuable services to the country in the field of agricultural research and education. The award is being conferred on you with effect from the date of the receipt of this message. The Government of India is pleased to inform you that the award is being conferred on you with effect from the date of the receipt of this message.

Yours sincerely
(K. Srinivasan)

Professor C. D. Parthasarathy
Government of India
Ministry of Agriculture and Food
College of Veterinary Science
Tamil Nadu Agricultural University
Coimbatore
Coimbatore 641 002



Smt. Rajeshwari Tandon
Social Secretary to PM
PMP-5685

Prime Minister's Office
New Delhi 110011
July 2, 1987

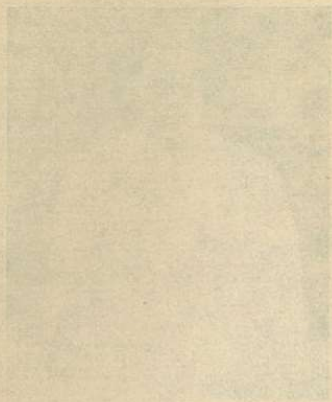
MESSAGE

Dear Shri Pathak,

The Prime Minister sends good wishes for the success of the 11th Annual Convention and the National Symposium of the Indian Society for Veterinary Surgery to be held in October 1987.

Yours sincerely,
(Rajeshwari Tandon)

Shri S. C. Pathak,
Professor & Head,
Department of Surgery & Radiology,
College of Veterinary Science,
Khanapara,
Guwahati-22,
Assam,



Prime Minister's Office
New Delhi 110011
July 2, 1987

Mr. Tejendra Lal
Social Secretary to PM
PMO 110011

MESSAGE

On 2nd July, 1987, the Prime Minister would wish to express his warmest wishes for the success of the National Symposium of the Indian Society for Veterinary Education and Research, which is being held in October 1987.

Yours sincerely,
(Tejendra Lal)

Mr. Tejendra Lal
Social Secretary to PM
PMO 110011
New Delhi



Raj Bhavan
Guwahati
August 20, 1987.

MESSAGE

I am happy to learn that the 11th Annual Convention of the Indian Society for Veterinary Surgery will be held at Guwahati from October 28, 1987 under the joint auspices of the Indian Council for Agriculture Research and the Department of Surgery and Radiology of the Assam Agricultural University. It is befitting the occasion that a National Symposium on Surgical Management of foot disorders in farm animals is also being held on this important occasion.

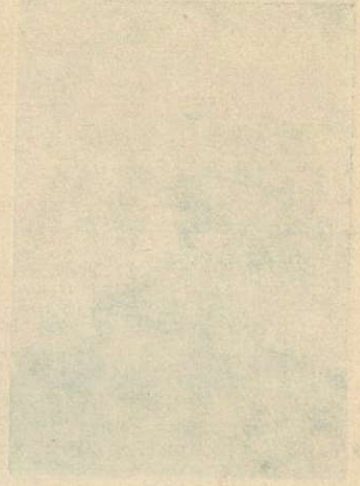
There is no doubt that a good number of scientists from all over the country and abroad engaged in the field of Veterinary Surgery, Radiology and Anaesthesiology are coming together to participate in all scientific deliberations connected with the function. The inter-action between the specialists in the different disciplines on a common forum will throw a great deal of light on the problems in these fields with particular reference to the north-eastern region. I hope the student and research workers too will benefit from these deliberations.

I wish the convention all success,

(Bhisma Narain Singh)



For Director
 Government
 August 20, 1987



MEMORANDUM

The Ministry of Health and Family Welfare, Government of India, is pleased to inform that the 11th Annual Conference of the Indian Society for Veterinary Surgery will be held at Chandigarh from October 28-30, 1987 under the joint sponsorship of the Indian Council of Agricultural Sciences and the Government of Punjab and Haryana. The Ministry of Health and Family Welfare, Government of India, is pleased to inform that a special arrangement has been made for the participation of the members of the Indian Society for Veterinary Surgery from all over the country and the Government of Punjab and Haryana. The Government of India is pleased to inform that the Government of Punjab and Haryana are providing financial assistance for the participation of the members of the Indian Society for Veterinary Surgery from all over the country and the Government of Punjab and Haryana. The Government of India is pleased to inform that the Government of Punjab and Haryana are providing financial assistance for the participation of the members of the Indian Society for Veterinary Surgery from all over the country and the Government of Punjab and Haryana.

(Signature/Name)



मत्यमेव जयते

Chief Minister
Assam
October 1, 1987

MESSAGE

It is heartening to learn that the Indian Society for Veterinary Surgery in collaboration with the Assam Agricultural University is organising a National Symposium on "Surgical Management of Foot disorders in Farm Animals" from 28th to 30th October, 1987. Bullock plays a pivotal role in Indian Agriculture and the cow is the second mother to all of us particularly to the growing children as well as the old and infirm. In this context, the subject chosen for discussion is quite befitting to the occasion. I am sure, the proposed National Symposium will take us one step further in the development of rural economy which is an integral part of Animal Husbandry and Veterinary.

I convey my greetings to all the delegates attending the Symposium and hope that their visit to this North Eastern region of the Country would be fruitful.

I wish the convention and the National Symposium all success.

(Prafulla Kumar Mahanta)
Chief Minister,
Assam

To
Shri S. C. Pathak,
Convener, and Professor & Head
Deptt. of Surgery & Radiology,
College of Veterinary Science
Khanapara, Guwahati-22



Chief Minister
Assam
October 27, 1957

MESSAGE

It is heartening to learn that the Indian Society for Veterinary Science, on the occasion of the Assam Agricultural University is organising a National Symposium on the Management of Foot Disorders in Farm Animals from 28th to 30th October 1957. Bullock plays a pivotal role in Indian Agriculture and the cow is the sacred mother to all of us particularly to the growing children as well as the old and infirm. In this context, the subject chosen for discussion is quite pertinent to the development of rural economy which is an integral part of Assam's prosperity and progress. I am sure the proposed National Symposium will take us one step further in this regard. I have my feelings to all the delegates attending the Symposium and hope that their visit to the North Eastern region of the Country would be fruitful. I wish the cooperation and the National Symposium all success.

(Pratibha Kumar Bhattacharya)
Chief Minister
Assam

Secretary
Department of Veterinary Science
Assam Agricultural University
Jorhat



Shri NAGEN SARMA,
Minister,
Veterinary, Sericulture & Fisheries
Assam, Dispur
Guwahati-6



D.O. NO.....

Date.....

MESSAGE

I am happy to learn that the INDIAN SOCIETY for VETERINARY SURGERY is holding its 11th ANNUAL CONVENTION and a National Symposium on SURGICAL MANAGEMENT of FOOT DISORDERS in farm animals from 28th-30th October, 1987 in the COLLEGE OF VETERINARY SCIENCE, ASSAM AGRICULTURAL UNIVERSITY, KHANAPARA, GUWAHATI-781022.

I have no doubt in my mind that bovine foot disorders have proved to be one of the barriers in production of milk in high yielding cows and also motive power in bullocks since the introduction of exotic breeds and intensive rearing of Cattle in this Country.

I hope that the VETERINARY SCIENTISTS participating in the symposium from different parts of the Country and abroad will identify the problem areas and bring out necessary suitable measures on the topic and other allied fields.

I wish the NATIONAL SYMPOSIUM a grand success.

(NAGEN SARMA)



D.O. No.

Date:



MR. WAGHEN SARMA

Minister
Veterinary, Sanitation & Fisheries
Assam, Dispur
Gowahati

MEMORANDUM

I am happy to learn that the INDIAN SOCIETY OF VETERINARY SUBJECTS is holding its ANNUAL CONVENTION and a National Symposium on "SUGAR MANAGEMENT OF FOOT DISORDERS IN FARM ANIMALS" from 28th October to 31st October in the COLLEGE OF VETERINARY SCIENCE, ASSAM AGRICULTURAL UNIVERSITY, KHANAPARA, GUWAHATI, ASSAM.

I have no doubt in my mind that bovine foot disorders have proved to be one of the barriers in production of milk in this leading cow and buffalo producing State. It is, therefore, since the inauguration of your office and intensive training of staff in this country.

I hope that the VETERINARY SCIENTISTS participating in the symposium from different parts of the country and abroad will identify the problem areas and suggest necessary suitable measures on the topic and other allied topics. I will be glad to have the NATIONAL SYMPOSIUM a grand success.

WAGHEN SARMA

Telegram : 'AGRISEC'
Telephone : 3 8 2 5 4 5
Telex:031-62249 ICAR IN

Dr. R.M. ACHARYA
Deputy Director General
(Animal Sciences)

INDIAN COUNCIL OF AGRICULTURAL RESEARCH
KRISHI BHAWAN, Dr. RAJEDRA PRASAD ROAD.
NEW DELHI-1

MESSAGE

It is heartening to learn that the Indian Society for Veterinary Surgery in collaboration with the Assam Agricultural University is organising a National Symposium on Surgical Management of Foot Disorders in Farm Animals in relation to production at the eve of 11th Annual Convention of the Society at the Assam Agricultural University, Khanapara Campus. With the renewed realisation of the importance of draft animals the topic chosen for the National Symposium is very important. In reality the power in agriculture is still a limiting factor more so in arid and semi-arid regions where the soil moisture is available for limited period and major cultivation operations must be completed in the shortest possible time. There are number of afflictions of the feet and legs of farm animals especially the draft animals which require surgical intervention and the discussions of these problems and review of the available surgical techniques would definitely help not only the participants of the symposium but also the Field Veterinarians. On this occasion I convey my heartiest felicitation to the society for organising the National symposium. We will look forward for the recommendations of the symposium and I can assure the society of the interest the Council will take for their implementation to the extent these relate to research.

Telephone 382848
Telex 001-2222 JK

INDIAN COUNCIL OF AGRICULTURAL RESEARCH
KRISHI BHAVAN, RAJENDRA PRASAD ROAD
NEW DELHI

Dr. R.M. ACHARYA
Deputy Director General
(Animal Sciences)

ANNOUNCEMENT

It is pleasing to learn that the Indian Society for Veterinary Science in collaboration with the Assam Agricultural University is organising a National Symposium on "Clinical Management of Foot Diseases in Farm Animals" in Assam in the month of the year 1971. With the renewed emphasis of the Government of India on the development of the rural sector, it is very important to study the problems in agriculture in order to bring about a better and more productive agriculture. The foot disease is a limiting factor in the production of farm animals and its control is essential for the development of the rural sector. It is hoped that the symposium will be a most profitable one and will help in the development of the rural sector. The Indian Council of Agricultural Research is pleased to announce the symposium and the assistance of the Government of India in the form of a grant-in-aid. On this occasion, I convey my respectful invitation to the society for organising the National Symposium. We will look forward for the recommendations of the symposium and I can assure the society that the Council will take all necessary steps for the implementation of the recommendations.

GRAM AGRIVARSITY



PHONE OFFICE : ROWRIAH : 83165
OFFICE : JORHAT 21100
RESIDENCE ; ROWRIAH : 83195

Dr. P. C. Bora
VICE - CHANCELLOR.

ASSAM AGRICULTURAL UNIVERSITY
JORHAT 785013

D.O.No,AAU/M-3/87/618
Dated September 5, 1987

MESSAGE

Dear Dr. Pathak,

I am happy to learn that a three day National symposium on "Foot disorders of bovines in relation to Health & Production" is being organised in the Dept. of Surgery and Radiology, College of Veterinary Science, AAU, Khanapara, from October 28 to 30, 1987. Since bovines play a pivotal role in Indian Agriculture, people have to be very much concerned about the health of our livestock. with the introduction of exotic breeds of cattle through the cross breeding programmes, I understand that foot disorders have become a common problem in cross bred animals. Some of these disorders are inherrent particularly in heavy animals.

The problem of foot disorders must be scientifically assessed and solved in the greater interest of the farming community lest it adversely affects the rural economy. It is, therefore befitting that such an important topic is chosen as the theme of the symposium. The fruitful deliberations on this important problem by the scientists of the country and also abroad will definitely help the Veterinarians of the State to understand the proportion of the problem and its scientific sloution .

I wish the symposium a grand success.

Yours sincerely
(P. C. Bora)

Dr. S. C. Pathak
Professor & Head,
Deptt. of Surgery & Radiology
College of Vety. Science
AAU. Guwahati-22

OFFICE : BUREAU OF
CATTLE RESEARCH
RESISTANCE, NEWARK, NEW JERSEY



GRAM ACTIVITIES

ASSISTANT AGRICULTURAL UNIVERSITY
COURT HOUSE
D. O. H. 4-3-7-17
Date September 8, 1967

Dr. P. C. Bess
VICE - CHANCELLOR

MISSAGE

Dear Dr. Bess:

I am happy to learn that a first rate national symposium on the diagnosis of bovine tuberculosis is being organized in the Department of Surgery and Pathology, College of Veterinary Medicine, Kansas State University, Manhattan, Kansas, from 28 to 30, 1967. This symposium will be a very much needed one for the health of our livestock with the increasing of cattle breeds of origin through the cross breeding program. I understand that footrot has become a common problem in some areas of the country and that the most important factor in its spread is the animal.

The problem of foot rot should be a national concern in the greater interest of the beef community. It is a disease of the hoof and the hoof is the most important part of the animal. The most important part of the hoof is the hoof wall. The hoof wall is the most important part of the hoof and the hoof wall is the most important part of the hoof. I wish the symposium a grand success.

Yours sincerely
(P. C. Bess)

Dr. S. C. Patrick
Professor of Pathology
Dept. of Surgery & Pathology
College of Veterinary Medicine
AAU, Manhattan, KS

PROGRAMME

Tuesday, 28.10 87

8.00 a. m.

Registration of Delegates.

9.00 a. m.

Flag hoisting.

9.30 a. m.

Inaugural Session.

10.30 a. m.

Tea break.

11.00 a. m.

Session I

RADIOLOGY

Chairman : Dr. Harpal Singh

Rapporteur ; Dr. A.P Singh

Lunch break.

1.30 p. m.

Session II

ORTHOPAEDIC SURGERY

Chairman : Dr. S.S. Rathore

Rapporteur : Dr. S. C. Ojha.

Tea break.

4.30 p. m.

5.00 p. m.

Session III

EXPERIMENTAL SURGERY,

Chairman : Dr. J. M. Nigam.

Rapporteur : Dr. P. K. Bose,

Cultural show.

6.30 p. m.

8 00 p. m

Dinner

Wednesday, 29.10'87

9.00 a.m

Session IV

ANAESTHESIOLOGY

Chairman : Amresh Kumar

Rapporteur : Dr.S.K.Pandey

Tea break

10.30 a.m

11.00 a.m

Practical

Chairman : Dr.R.P.S.Tyagi

Lunch break

1.30 p.m

Session

Rapporteur : Dr.S.S.Misra

2.30 p.m

Session V

CLINICAL SURGERY

Chairman : Dr.O.Ramakrishna

Rapporteur : Dr.D.C.Dhablania

Tea break

4.30 p.m

5.00 p.m

Session VI

UROGENITAL SURGERY

Chairman : Dr.D. Krisnamurthy

Rapporteur : Dr. D. M.Tadkod

Plenary Session

6.30 p.m

8 00 p.m

Dinner

Thursday, 30.10.87

Sight seeing

CONVENER WRITES

Dear colleague,

I have great pleasure to welcome you all to the 11th convention of the Indian Society for Veterinary Surgery and National symposium on "Surgical Management of foot disorders in farm animals in relation to health and production." As a matter of fact, the seventh convention was to be held at Guwahati, but as the State was undergoing stress due to unabated influx of foreigners from across the border, the atmosphere was not at all congenial and hence at the last moment, it was decided to shift it to Trichur, Kerala.

I, on behalf of the faculty in particular and the Assam Agricultural University in general express our gratitude to the Society for allowing us to host the 11th convention. The moral and financial support extended by our Vice-Chancellor, Dr.P.C. Bora deserve special mention, for which it has been possible to host it here to-day. The Government of Assam, the deptt. of Animal Husbandry and Veterinary, Assam, extended invaluable help. I also acknowledge with thanks the help rendered by the President and the Executive Secretary, Dean, Faculty of Veterinary Science and the Director, Post graduate Studies.

The Assam Agricultural University came into being in the year 1969 with its headquarter at Jorhat, 314 km. from here, with two constituent colleges i.e. College of Agriculture at Jorhat and College of Veterinary Science at Khanapara. In the year 1973, the College of Home Science was established at Jorhat. With the implementation of 20 point programme, Assam faced shortage of technical hands in the field of Agriculture, Veterinary, Fishery etc. In order to meet up the demand, the Second College of Agriculture at Biswanath Chariali, Veterinary College at North Lakhimpur, the first College of Fisheries at Roha, the college of Forestry have been established recently. As you are aware that Assam is known for her silk and Muga and good infrastructural facilities exist, the University has come up with a unique proposal to open a College of Sericulture within a couple of year. This University serves all the seven States of the North Eastern Region.

About the State of Assam, College of Veterinary Science, Khanapara, and the history of Surgery in Assam, three articles have been published in this souvenir which will brief the readers and as such I feel there is no necessity to repeat them here.

We have made an earnest attempt to build up the surgery department step by step with our limited resources and hope in course of time it will be a unique one in the Country.

Though all possible care have been taken within the limited resources to organise the convention, accomodate the delegates as suitably as possible, lapses or omissions may be there due to unavoidable circumstances. I, on behalf of the reception committee would request the esteemed delegates to bear with us and carry lingering memories after their sojourn here.

Long live ISVS.

S. C. Pathak

A WINDOW TO ASSAM

Dr. Lalit Chandra Bora
Associated Director of Extension
Education, Assam Agricultural
University Khanapara

To depict a vivid picture of Assam is a gigantic task, it is further difficult when it is to be described through such a small article. Though the title of the article is named as "A window to Assam", the readers will have only a small hole on the window glass, through which they may have a look into outside and be satisfied with a small part of what they actually ought to have liked to know about this lovely land.

The word "Assam" is derived from the Sanskrit word 'Asom', meaning peerless'. Judged by her exquisite natural beauty, cultural richness, the vast natural resources, as well as her human wealth. Assam mean matchless or unparallel.

Assam covers a territory of 78.523 Sq. kilometers, roughly a fourth of it comprising of rugged, hills and the rest verdant alluvial plains. It is in the heart of India's north eastern region and the city of glorious Guwahati, the ancient city of "Pragjyotispura", or the city of the first eastern light, the city of ancient Kamrupa of 'Mahabharata' fame during the days of the king Bhaggadatta an important city, during the golden days of Ahom kings of Assam, can even now claims to be a gateway city to the entire north eastern states of the region.

The Arunachal hills emerge along its northern limit and bend sharply at its north eastern border. Nagaland and Manipur make the part of the eastern boundary and the Mizoram hills and the State form its, southern extreme. Bangladesh, lies in the west sharing Assam's western border with Meghalaya and Tripura.

The alluvial Brahmaputra valley forms the major share of the territory. The valley finally opens out in to the North Bengal plains. A land of the mighty "Red River and the Blue hills", Assam's valley of the mighty Brahmaputra with a 724 km. sweep is unique in beauty and abundance. The world's largest river island, with a size of 929 Sq. kms. has been formed by this mighty river. Heavy rains, topography and occasional earthquakes make the river capricious and destructive, bringing sorrows to the people of the valley in form of recurrent floods alongwith her innumerable rivers falling into the bosoms of the Brahmaputra. The river leads makes and unmakes to agricultural bounty to the people and one can imagine how the state of Assam could prosper when the mighty river can cause floods and damages of crops 3-4 times during a crop season alongwith many inundated tributaries during the rainy months of a single year. The river, when recedes after

the floods, not only leave behind its rich alluvial fertile soils , but at the same time leaves at many a field with sand , stone and clay , making agricultural production impossible or prohibitive . We have reasons to believe that if scientifically controlled and properly tamed, the mighty Brahmaputra project will bring abundant prosperity to the country in the form of electricity and agricultural wealth , and may be instrumental in changing the whole picture of economy of the N.E. Region and of the country .

The Barak valley in the south is marked by swampy flats , unusually diversified by low and lonely hills . The river Barak dominates the valley and it too , at times, swells to devastating proportion during the monsoon and cause misery to the people of the valley . Unlike of the river Brahmaputra , the taming of the river Barak , may minimise the sufferings of the people of the valley and the cachar district . The two valleys are seperated by the State's hill region .

Undivided Assam of by gone days , comprised of the present states of Arunachal Nagaland , Mizoram , Manipur and Meghalaya etc . besides the present state of Assam. Assam may be called now the eldest sister State and the remaining states as younger sisters . So , many like to call the N.E. Region , a land of 'Seven Sisters.

Assam's human landscape is no less colourful and varied than her physiography. From time immemorial she has been the meeting ground of diverse ethnic and cultural streams . A land of unity in diversity people of different races and ethnology migrated into this land and merged into a common harmonious whole in the rare processes of fraternisation and subsequent assimilation .

The political divisions of old Assam into several states may, perhaps, be a political necessity and historical event . It is , the people , who , may make and unmake history . However , the wiser and consensus present day opinion of the people in the present state of Assam is that Assam should not further be allowed to be fragmented for the sake of sheer economoy, cultural and traditional heritage of the people . Though Assamese is the major language of the State, we are liberal to see and act so that other recognised Indian languages spoken in the State , such as , Bengali, Hindi , Oriya, Mundari Tamil , Santal , Telegu , Nepali as well as the languages of the plains and hill tribal population should develop and prosper .

Assamese sentiment , since ages , was that 'let us be great people of the state of a far greater country' , where the historical and natural process of assimilation should not be discouraged and resisted by any group of people , who , are preivilaged to reside in this lovely state of Assam .

In 1971, there was a record of decadal growth of population in Assam during the last 10 years prior to the year 1971 to an alarming 24.% and subsequently this rate tended to grow in fhe years that followed the years after 1971 , thus people have, justifiable apprehension that the growth rate in population compared to all india , averages in other states , was due to illegal entry and occupation of the foreigners from the present country of Bangladesh . As a result there was stir in the whole of Brahma-putra valley mainly and the movement against the entry of the foreigners without valid

authority and documents and the students' major involvement in the movement has become the part and parcel of the cultural and economic existence of the indigenous people and of the state ; and it will, forever , be written and recorded in the history of Assam in future .

The beauty of Assam lies in her culture and Assam is extremely under urbanised. According to 1971 census only 8.9% of the total population of the state lived in towns. She has about 22,000 inhabited villages accounting for about 4% of the country's total numbers of villages .

With a present population (1987) , which is about to touch 2 crores, still Agriculture continues to be the mainstay with the people for subsistence . Assam's Agriculture and Animal Husbandry, pisciculture, apiary, weaving and textile, cottage industry and other industries, no doubt, have been developed during the past decades after the independence, but still in these aspects Assam is yet to keep pace with the rates of development with many other states of the country .

Every body knows that Assam is rich in petroleum resources and products. She is rich in other mineral resources like coal , limestone etc . The flora and fauna of Assam have speciality. Assam is noted for having one horned Rhinoceros conserved in famous national park 'Kazironga' and other sanctuaries. The elephants, tigers, deers and varieties of other precious wild lives , with vast forest resources contribute the State's economy and this will enrich the state , provided , people and the government may take timely and appropriate steps both scientific and organizational , for their future development in the state to benefit the people .

Now , let me introduce a little our esteemed visitors to the city of Guwahati, The modern city of Guwahati , - the modernity and the development of which is fast turning it into a magnificent metropolis and the state's capitals it is still hallowed by antiquity and natural beauty. Guwahati preserves history and it still abounds in countless monuments of bygone days . It is the city of 'Pancha Tirtha' or the seat of five pilgrimages. The temples of Navagraha, Ugratara, Sukleswar, and Goddess Kamakhya are located in the city itself . The temple of Kamakhya is located atop the Nilachala hills and it is considered as one of the famous pithasthans of India . A motorable road winding up across panoramic scenes takes one to the hill top from where one can drink in an almost divine view of the city down below and the great river Brahmaputra it overlooks Umanada, fondly referred to as the peacock island is the seat of a Siva temple . It is located in a hillock in the midstream of the Brahmaputra and is visible from Guwahati. The Sivaratri festival of Umananda attracts hundreds of visitors every year during the day of Sivaratri .

Navagraha atop the Chitrasala hills is a temple of nine planets and was in the remote past a renowned centre of Astrology, and Astronomy thus justifying the name of the ancient Guwahati as Pragjyotispura or the city of the eastern lights . The temple of Janardana is located in the heart of the city atop the Sukleswara hillocks by the southern bank of the Brahmaputra .

On the north bank is Aswaktanta, where, Arjuna and his weary horse according to legend had rested during his journeys made in connection with the performance of his Aswamedha of the Mahabharata fame.

Now coming to the south of Guwahati by the side of the three rippling hilly streams, 'Sandhya, Lalita and Kanta', you will find Vasisthashram where Mahamuni Basista was once said to be in his tapasya by setting up his ashram in this place, which is famous from time immemorial, as the ancient heritage of sage Basistha or 'Basisthashram'. The temple of Basistha is located in a very serene and idyllic environment.

In upper Assam of the state, one will find the famous temples of Ahom kings, such as 'Sivadol, Joidol, Bishnudol, Devidol' and the like. The ponds dug during the days of Ahom kings, such as, Sivasagar, Joysagar, Gourisagar etc, still keep the people in wonder as to how the water level of these ancient ponds of history can still be maintained intact throughout the years. The Sivaratri festival near Sibsagar tank attracts devotees from all over the country every year. Sibsagar abounds in the Archeological monuments and beauty. Mention may be made of 'Rongghar' (the place of sports), and 'Talatolghar' (the underground and overground multistoried Ahom king's palace), which, though somewhat in ruins, stand the taste of time for hundreds of years of the past.

The famous 'Hagriva Mondir' at Hajo, in Kamrup district, embraces also the Muslim pilgrimage 'Powamecca' as well as place of worship for the Buddhists. It is, therefore, a unique scene to be seen here that side by side, the Hindus, the Muslims and the Buddhists offer worships in accordance to their religious norms and faith in a same place, which, is called Hajo. Can there be any better example of 'unity in diversity' even in the spheres of religion.

In conclusion, the readers will, naturally by their profession, will desire to know something about Assam's cattle wealth.

The Assam cattle is of nondescript type having low productivity and poor draughtability. Fortunately, impact of the Government cattle development projects with the help of expertise of concerned departments of the College of Veterinary Science of the Assam Agricultural University, can be appreciated even by paying visits to certain places or 'pockets' not too far from the Veterinary College and here one can see and appreciate that some of the country's best cross bred and pure bred dairy animals have been being raised both by the indigenous as well as people like the Nepalis and the Biharis.

It is equally true that the impact of such development is yet to be seen and felt throughout the nook and corners of the State, though, the Government and the people have honestly kept trying through various cattle and milk production schemes funded by the State, Central and other concerned sectors. It is hoped more progress, as a result, could be evidenced at the end of the seventh plan period.

VETERINARY EDUCATION IN ASSAM, ITS PRESENT AND FUTURE

Dr. G. K. Roychoudhury,
Dean, Faculty of Vety. Science
Assam Agricultural University,
Khanapara Campus, Guwahati-22

The Assam Veterinary college was established in 1948 and since then it is catering to the needs of trained Veterinary and Animal Husbandry manpower of Assam and its neighbouring states and Union Territories of the North Eastern Region. This college was started with a post Matriculation three years (G.V.Sc.) diploma programme and later extended to 4 years. In 1951 the Assam Veterinary College was affiliated to the Gauhati University under which it offered a post Matriculation 4 years B.V.Sc. & A.H. degree programme. Along with the introduction of 10 + 1 Higher Secondary education the duration of the B.V.Sc. & A.H. course was extended to 5 years. Subsequently with the introduction of 10+2 Higher Secondary education in 1972 the B.V. Sc. & A.H. course was again reduced to 4 years duration. In 1968 Assam veterinary College instituted M.V.Sc. programmes in vety. Medicine, Gynaecology, physiology, Dairy Husbandry, and Animal Nutrition. At present, all the 13 departments of the College have M.V.Sc. programme while nine of these departments have already Ph.D. programme.

In 1969, the College was transferred by the Govt. of Assam to the newly established Assam Agricultural University as one of its constituent colleges renamed as College of Veterinary Science.

The B.V.Sc. & A.H. examination of the Guwahati University was held for the last time in 1972 under the traditional system. With the establishment of the A.A.U. in 1969, the traditional system was replaced by the course credit system with internal assessment initially under trimester setup, followed by semester set up in 1977.

The Veterinary education in the state has advanced to a great extent during the past 39 years. To cope with the needs of the time and to support the various livestock development programmes, the course schedule of the academic programme has been expanded to accommodate new subjects like Poultry Science, Radiology, Veterinary Public Health, Biochemistry and Statistics. Subjects like Gynaecology and Obstetrics, Microbiology, Extension Education, Animal Nutrition, Genetics & Breeding which constituted parts of some major subjects during 1960 have developed to independent major subjects. The N.C.C. training has been made compulsory for all Veterinary students and is usually offered during the first two years of the B.V.Sc. & A.H. degree programme.

The Assam Agricultural University shares the pride of being one of those Universities in the Union to introduce the 'Internship' programme on its own from 1983. This internship programme which is aimed at imparting exclusive practical training to the final year B.V.Sc. & A.H. class students after successful completion of the course work requirement for the degree. During the 6 months period of internship the students are attached to field Veterinary Hospitals, Dispensaries, Govt. farms etc. to work and expose themselves to field problems pertaining to animal health cover, artificial insemination, farm management, I.C.D.P. programmes, record keeping, under the guidance of experienced, qualified Vety. doctors. With the introduction of the internship course the duration of B.V.Sc. & A.H. degree programme have become 4 years to $4\frac{1}{2}$ years.

The ICAR committee of the Deans of Veterinary colleges has recommended extension of duration of the Veterinary core courses from the present 4 years to $4\frac{1}{2}$ years and another six months period of Internship training. The ICAR is also contemplating to frame a model syllabus for B.V.Sc. & A.H. course for implementation by the Veterinary Colleges in the country. "The College of Veterinary Science is also considering seriously the recommendations with all its possible perspectives and may take a decision in this regard very soon. The College is also taking steps to review the course syllabus of the B.V.Sc. & A.H. degree programme so as to make the training more field oriented. To this effect a committee of teachers of the College, student representatives and senior and experienced Veterinarians from the State Deptt. or Veterinary Services have been constituted."

It is strongly felt that the present day Veterinary education is losing its professional character to fundamental sciences even at the undergraduate level under the Agricultural University system. This is probably because more emphasis is given on the academic attainments and research contribution of teachers over the field experience. Hence the recruitment policy of teachers probably needs to be reviewed and equal weightage be given to the acquired field experiences and academic attainments. It should be made obligatory for teachers of Veterinary College to get themselves exposed and associated with the field problems. More emphasis should be given on field oriented applied research particularly by the clinical, paraclinical and production departments.

The Indian veterinary Council which has been enacted in the recent past has the regulatory power over the veterinary education in the country in the line of the Indian Medical Council. If the veterinary Council takes over the regulatory power over the veterinary education there will be immense scope to maintain the required high standard of veterinary education and prepare young veterinarians capable of handling various Livestock Development and production programmes in the State more efficiently.

HISTORY OF VETERINARY SURGERY IN ASSAM

Dr. H. N. Sharma.

Director, Post Graduate Student A. A. U.

In pre independent days the department of A.H. & Vety. was a minor department under the State Government and was run by a handful of officers and field workers. The budget provision under the State was meagre. There was no initiative for any developmental work and priority was given in the control and prevention of epidemics only. The dreaded diseases like Rinderpest, Blackquarter, Haemorrhagic septicaemia, B.C.P.P. etc. were widely prevalent in those days in Assam. Veterinary hospitals and dispensaries located in the towns, district and subdivisional headquarters had to cover vast areas. Vaccination, Castration, treatment of medicinal cases and treatment of various types of wound were the routine work. Surgical ailments like fracture, dislocation, tumour etc. were not uncommon. Dystokia was very common because of the size of the local cows and the method adopted to relieve such cases was restricted to hand manipulation and embryotomy. No attempt was made to undertake caesareotomy even when those methods failed, and the animal died otherwise. It was due to lack of facilities and lack of skill of the vets. The other factor involved was low cost of the animals and as such, general consciousness among the owners were discouraging. But as the time elapsed, the things started progressively changing towards better ones.

After independence, like other parts of the Country, Assam also made a commendable beginning for self sufficiency in agriculture. In the year 1941. Assam Veterinary College was born with few senior Officers from the field, transferred as Lecturers. An one hundred sq. ft. room of the Guwahati Vety. hospital was utilized as the deptt. of Surgery & Gynaecology with one Lecturer and one Asstt. Lecturer. Under the new set up, systematic teaching started in the subject of surgery. As the facilities were inadequate, risks of major operations were usually avoided. Minor surgical procedures were done either using local anaesthetic or narcotics or combining both. These operations were restricted to clinical cases only. Demonstration of various operations to students were done on dead or euthanised animals. Though there was necessity and urge to develop or add facilities this was not possible due to scarcity of space and fund. Despite these handicaps, our students earned excellent surgical skill on clinical cases and we produced some excellent surgeons.

In the year, 1960, the Assam Veterinary College was shifted to its permanent site at Khanapara. Facilities like large and small animal operation theatre, a 50 mA

X-ray machine, instruments, equipments, provision for indoor patients etc. etc. were added every year depending upon allotments of budget. Junior teachers were selected and appointed. The author was deputed for M.S. to U.S.A. under T.C.M. programme. Another teacher was deputed outside the State for M.V.Sc. followed by one more to Denmark for advance training. These trained and qualified staff are instrumental in modernising the Vety. Surgery in the State. M.V.Sc. in Surgery was opened in the deptt. and with this, experimental and research works were initiated. Infrastructural facilities were in the increase and technical skill of work became praiseworthy. The society realised these salutary trend and sought for radiography and other types of operations for their animals. Ambulatory facilities were extended to remote farmers and Surgery could be demonstrated to students in field conditions. Volatile and injectable general anaesthetics are routinely used now, and all sorts of operation are performed.

With the establishment of Assam Agricultural University in the year 1969, the Assam Vety. Callege with all its staff were transferred to the University. In the year 1973, the world bank came up for aid, followed by a spectacular development in Surgery. Six staff members obtained Doctorate degrees from leading Indian Agricultural Universities and the author was sent for post Doctorate to Cambridge. One 300mA X-ray unit and a transportable 20 mA unit were added. Purchase of sophisticated equipments were done. The new surgery building of 20,000 sq. ft. plinth area was constructed under I.D.A. project. In this building there is one air-conditioned operation theatre for experimental surgery, two small animal theatres, one large animal theatre, surgical physiology laboratory, precision laboratory, provision for indoor patient for dog, goat, cattle, pig, horse, cat and birds, seminar room, conference room, museum, reading room, visitors room etc. Now, it is one of the most neatly organised department in the faculty. The staff members have commandable team spirit and keep working during holidays and odd hours. Their expertise are being utilized by Wild life sancturies, Army equine hospitals, Police horse and dog squads, Govt. Livestock farms and private sector dairy farms.

Different clinical research problems are being offered to the post graduate students. Coenurosis in Goat and Foot disorders in cross bred animals are problem of the farmers. These diseases cause considerable economic loss. With a view to undertake systematic scientific studies on these problems, the ICAR has granted an adhoc research scheme "Studies on pododermatities in cross bred animals in Assam." The Science, Technology and Environment deptt. of the Govt. of Assam, has granted the other scheme "Studies on Coenurosis in Animal with special reference to Goat."

All aspects of these important diseases are being studied with interesting findings and development of techniques. In the field of orthopaedics the latest techniques are being used, caesareotomy and other major operations are routinely done. Surgical operation under general anaesthesia are performed in captive and semiwild animals. Demonstration to students are done on live animals.

The deptt. now offers courses to M.V.Sc. & Ph.D degree programme also in addition to under graduate, short refresher courses to the field vets. and courses on first aid to farmers.

The present staff position of the Surgery & Radiology Deptt. is as follows :

Professor	: 2 (Two)
Assoc. Professor	: 5 (2 vacant)
Asstt. Professor	: 7 (6 vacant)
Lecturer	: 2 (1 vacant)
Sr. Lab. Asstt.	: 1
Radiographer	: 1
Dark room Asstt.	: 1
Typist	: 1
Lab. Attendant	: 1
Animal Attendant	: 2
M/R employee	: 1

The annual budget provision for Sugery Deptt. is Rs. 7,12,000.00/-.

A BRIEF REPORT ABOUT THE SOCIETY

Dr. J. M. Nigam.

Executive Secretary

I. S. V. S.

Indian Society for Veterinary Surgery was established in 1977 with joint effort of senior professors of Veterinary Surgery & Radiology and whole hearted help of young staff members of the Deptt. of Surgery & Radiology of different colleges and field veterinarians throughout the country. This society has following objectives ;

1. To provide a common platform for members of society to present, discuss and formulate scientific information obtained after organised records, clinical trials or analysis of personal experiences.
2. To keep abreast with current development in different disciplines of Veterinary Surgery, Anaesthesiology, and Radiology.
3. To promote creative research, inventions and modifications which are of direct utility to Surgery, Radiology or Anaesthesiology in particular and to Livestock health in general.
4. To publish the journal of the society for incorporating all the research and clinical work carried out by the members in different spheres.

The headquarter of this society is the place where the Executive Secretary and Treasurer are working. For better functioning of society, it has Western, Eastern, Southern, Northern and Central Zones with zonal Secretaries.

The society's executive council comprises of president Vice-presidents, Secretary, Executive Secretary, Treasurer, Zonal Secretary, Editor, Asstt. Editor and Public Relation Manager. All of them are elected in a general body meeting after every two years. All the decision of the society are taken by this executive council and then approved in general body meeting.

Achievements :-

After ten years of its establishment the society has come out with following outcomes -

- i) **Membership** : There are nearly 430 members of the society which includes teaching and research staff and field Veterinarian throughout India. Out of the 430, 180 are the life members. Every memberd is entitled to attend the general body meeting, conferences, symposia and seminars etc. under the auspices of the society and is entitled to receive the publications of the society.

- ii) **Conferences organised by the Society** : The society is organising annual symposium and conferences once in a year, since its inception. A large number of delegates including teacher, researchers and field Veterinarians attend these symposium for exchange their ideas and experiences. The society brings out a Souvenir at every conference which include the abstracts of all the research/clinical papers presented at the time of the conference.
- iii) **Publication of Indian Journal of Veterinary Surgery** : Indian Journal of Veterinary Surgery is being published for the last eight years. This is a half yearly publication. Excellent results of research and clinical experiences are published in it for extending latest knowledge to all the members and subscribers of the journal. The journal is widely distributed in India and abroad to all members, national and international libraries. Indian council of Agricultural Research provides financial assistance for publication of this journal.
- iv) **News letters** : The society is bringing out news letters in every two months to make aware all the members about news of the society, changes/promotions/academic achievements of the society.
- v) **Award of plaques and commendation certificates** : Members who render meritorious service to the cause of the society by way of scientific, financial or other contribution, is awarded plaque/commandation certificate.
- vi) **Award for presentation of best clinical surgical paper by young surgeon and student surgeon** : The society will award "young Surgeon's award" to best clinical surgical paper. Also All India Surgical skill competition will be held at the time of annual convention. It will be a competition on all India basis. Best Surgeon will be judged among the student surgeons on the basis of his surgical techniques and prize will be awarded by I.S.V.S.
- vii) **An All India Co-ordinated project** : An all India co-ordinated project on "The Study of affections of the musculo-skeletal System" is being submitted to ICAR, work, under this project, will be conducted at different institutes and the results will be analysed collectively.
- viii) **Horse Breeder's Guide** : The society will bring out a "Horse Breeder's Guide" which will be of great help to horse breeders.

The Conference organized by the Society is the foremost annual symposium and conference held in India since its inception. A large number of delegates including teachers, researchers and students from all over the country are invited to attend the Conference. The Society has set up a Special Committee which includes the experts of all the research fields presented at the time of the Conference.

iii) Publication of Indian Journal of Veterinary Surgery, India Journal of Veterinary Surgery is to be published for the first time. This journal is a half-yearly publication. Excellent results of research and clinical experiences are published in it for extending latest knowledge to all the members and associates of the Society. The journal is widely distributed in India and abroad to all members, national and international. Indian Journal Council of Agricultural Research provides financial assistance for publication of the journal.

iv) The Society is invited to attend all the national and international conferences to take away all the latest news about the progress of the Society.

v) A list of members and associates is published. Members who render meritorious service to the progress of the Society by way of scientific, financial or other contributions are awarded various commendation certificates.

vi) Award for research work in different fields is given to young workers and students. The Society will award young workers awards to best research papers. All the research papers submitted will be judged at the time of annual convention. It will be a competition on all India basis. Best research papers will be judged along the lines suggested on the basis of the original techniques and will be awarded by the Society.

vii) An All India Coordinated Project on "Study of diseases of the equine skeletal system" is being undertaken. The project will be conducted at different institutes and the results will be analysed collectively.

viii) Horse Breeder's Guide: The Society will put out a "Horse Breeder's Guide" which will be of great help to horse breeders.

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SESSION I

(Veterinary Radiology)

Chairman—Dr. Harpal Singh

Rapporteur—Dr. A. P. Singh

SESSION I

(Veterinary Radiology)

Reported by—Dr. A. P. Singh

Chairman—Dr. Harpal Singh

Venography of Facio-Orbital Veins and Basal Sinuses in Sheep

Kuldip Singh, S. K. Chawla, R. Tayal, D. N. Sharma, M. S. Konwar.
and D. Krishnamurthy

*Deptt. of Surgery & Radiology, College of Vety. Science, Haryana Agril.
University, Hisar.*

The technique of venography was done in sheep for visualizing the facio-orbital veins and basal sinuses following cannulation of the facial veins followed by injection of 10 to 15 ml sodium iohalinate (70%w/v). The venograms delineated the major intracranial and extracranial venous channels in most of the animals. The procedure was safe and had no side effects at any stage.

Contrast Gastrography in the Dog

Rishi Tayal, Mohinder Singh, S. K. Chawla, Kuldip Singh and D. Krishnamurthy

*Deptt. of Surgery & Radiology, College of Vety. Science, Haryana Agril.
University, Hisar.*

Positive, double and triple contrast gastrography along with pneumogastrography was attempted in dogs without fluoroscopic aid using air and barium sulphate as negative and positive contrast medium respectively. Good quality radiographs were obtained when barium sulphate (30-40%) was used at dose rate of 1.0 to 1.5 ml per/kg body-weight. Different recumbent projections viz. right and left lateral, right and left lateral oblique, and ventrodorsal were considered essential to delineate the gastric wall. Triple contrast gastrography had advantage over the double contrast technique as it also outlined the serosal surface of the stomach.

Contrast Radiography of the Equine Gastrointestinal Tract

Rishi Tayal, Mohinder Singh, Kuldip Singh, S. K. Chawla and D. Krishnamurthy.

*Deptt. of Surgery & Radiology, College of Vety. Science, Haryana Agril.
University, Hisar.*

Contrast radiography of the gastrointestinal tract was conducted in donkeys using barium sulphate (70%w/v) at dose rate of 8-10 ml per kg body weight. Standing and recumbent left lateral and ventrodorsal radiographs were adequate for visualization of most parts of the alimentary tract. The contrast medium disappeared completely from the canal by 72 to 90 hours.

Radiological Evaluation of Head and Neck affections in Different Species of Animals-A Review of 353 Cases

A. K. Bhargava, G. R. Singh, H. C. Sethia.

Division of Expt. Med. and Surgery, I. V. R. I., Izatnagar. 243 122.

The study was based on the radiological evaluation of 353 cases of affections of head and neck referred for radiological evaluation during last 10 years. The diagnosis was mainly based on plain radiographs taken in different views, however, in few cases special procedures like ventriculography and angiography were also used. The study includes affections of head and neck in various species of animals viz. Cattle, Buffalo, Sheep, goat, dog and rabbit. The radiological signs such as change in bone density, deviations in septa, increased soft tissue density, widening of suture lines, organized soft tissue growth, calcification of soft tissue or periosteal proliferation were taken as criteria in classifying the lesions. The lesions were classified as degenerative, developmental, metabolic, neoplastic, inflammatory and traumatic abnormalities.

Studies on Experimental Bronchography in Goats

S. K. Tiwari, ; H. P. Singh, and V K. Sharma

*Deptt. of Surgery & Radiology. College of Vety. Science Pantnagar,
Nainital (U.P.)*

Unilateral right lung bronchography was performed in 9 healthy goats equally divided into 3 groups for comparative evaluation of three contrast agents : 50% w/v aqueous suspension of barium sulphate , 100 to 110% w/v aqueous suspension of Microbar HD mixed with 1 g carboxy methyl cellulose per 10 ml of each suspension and conray-420. On the basis of good bronchial visualization and minimum physiological and histopathological changes following intra trachial instillation of 50% w/v aqueous suspension of barium sulphate mixed with methylcellulose, it could be recommended as a safe bronchographic agent in goats.

Cranial Sinus Venography in Sheep

A. P. Singh, M. S. AL-Badrany, T. A. Abid, S. M. Eshou

*Deptt. of Medicine, Surgery and Obstetrics. College of Vety. Medicine, University
of Mosul, Iraq.*

A technique of venography is described for demonstration of orbital venous system and cavernous sinuses in sheep following cannulation of angularis oculi vein and injection of 12 to 15 ml sodium iohalate as contrast medium. The venograms provided a clear visualization of most of the components of orbital venous system and cavernous sinuses in all the animals. In two sheep, dorsal longitudinal sinuses were also demonstrated.

Studies on Experimental Bronchography in Cattle

S. K. Tiwari, H. P. Singh, and V. K. Sharma

Dept. of Surgery & Radiology, College of Veterinary Science, Patna,
Bihar (U.P.)

Unilateral right lung bronchography was performed in 9 healthy goats, equally divided into 3 groups for comparative evaluation of three contrast agents: 50% w/v aqueous suspension of barium sulphate, 100 to 110% w/v aqueous suspension of methylcellulose mixed with 1 g carboxy methyl cellulose per 10 ml of each suspension and contrast. On the basis of good bronchial visualization and minimum physiological and histopathological changes following intra tracheal instillation of 50% w/v aqueous suspension of barium sulphate mixed with methylcellulose, it could be recommended as a safe bronchographic agent in goats.

Cranial Sinus Venography in Sheep

A. P. Singh, M. S. Al-Bahany, T. A. Adil, S. M. Estouf

Dept. of Medicine, Surgery and Ophthalmology, College of Veterinary Medicine, University of Mosul, Mosul, Iraq

A technique of venography is described for demonstration of orbital venous system and cavernous sinuses in sheep following cannulation of angular oculi vein. An injection of 12 to 15 ml sodium iodohalate as contrast medium. The venograms provided a clear visualization of most of the components of orbital venous system and cavernous sinuses in all the animals. In two sheep dorsal longitudinal sinuses were also demonstrated.

SESSION II

(Orthopaedic Surgery)

Chairman—Dr. S. S. Rathore

Rapporteur—Dr. G. C. Ojha

SESSION II

(Orthopaedic Surgery)

Chairman—Dr. S. S. Rathore

Reporter—Dr. G. C. Ojha

Metatarsial Bone Cyst in Bullock

S. S. Misra,

*Deptt. of Surgery & Radiology, College Veofy. Science & A. H., C.S.A. University
of Agriculture & Tech., Mathura Campus, Mathura*

A bullock, 8 years old was clinically lame when brought to the College-Clinic. Examination in the volar metatarsial region of right hind limb revealed gross-localised and sensitive intumescence. This swelling was as old as 8 months. Radiographic examination revealed a pedunculated bony-cyst stalked to the periosteum of the metatarsal bone containing scanty fluid. Hyaluronidase (10.IU), mixed with 2 ml. of hydrocortisone-acetate and 2 ml. Oxysteclin was administered following aspiration of fluid from the lesion. This combination was repeated for three consecutive occasions spaced at 4 days interval. Clinical recovery was evident with dissipation of lameness.

Desmotome for semi-closed Medial Patellar-Desmotomy in Bovines

S. S. Misra,

*Deptt. of Surgery & Radiology, College of Vety. Science & A.H., C.S.A. University
of Agriculture & Tech., Mathura Campus, Mathura*

An instrument innovated by the author pronounces as DESMOTOME, provides facilities for both the closed and open methods for medial patellar desmotomy. The instrument provides a semi-closed or a semi-open method. The instrument is single piece and is therefore, very handy. The desmotome ensures a sutureless operation for the malady besides, dispensing away a number of surgical instruments and sundries as employed in conventional techniques.

Tuber Coxae Osteotomy in a Mare to treat nonhealing Deep Wound

R. L. Bhardwaj, D. K. Sharma and D. Krishnamurthy.

*College of Vety. & Animal Sciences, H P Krishi Vishwa Vidyalaya,
Palampur, (HP)*

An adult police mare was brought to H. A. U. clinic with the history of non-healing wound of about two years duration. Clinical examination revealed avulsion fracture of tuber coxae and lodging of the fractured bone piece in non-healing wound. The osteotomy of necrosed bone at the site of fracture and removal of the lodged bone was performed under chloralhydrate narcosis and local infiltration analgesia. Dressing of the wound was done with BIPP and wound healed without any complication.

Surgical Management of Degenerative Muscular Cyst in a Jersey Cow

S. K. Sharma, Mohinder Singh, R. L. Bhardwaj, N. K. Vashist and V. K. Gupta

*Deptt. of Surgery & Gynaecology, College of Vety. & Animal Sciences, HP Krishi Vishwa
Vidyalaya, Palampur (HP)*

A crossbred Jersey cow of 6 years was presented with a large fluctuating swelling over the ventrolateral aspect of right flank area and showing apparant displacement of udder towards left side. On palpation and paracentesis, it was found a case of cyst. Animal was operated upon under sedation and local infiltration analgesia in lateral recumbency. About 10-12 litres of clear fluid was drained out and cystic pockets weighing 4-5 kg were removed. On Histopathological examination, it was confirmed to be a case of degenerative cyst.

Cruciate Ruptures in Camel

N. R. Purohit, D. S. Chuhan, R. J. Choudhury

Deptt. of Surgery & Radiology, College of Vety & Animal Science, Bikaner (Rajasthan)

Rupture of the cruciate ligament of right femorotibial joint was recorded in a camel. The history, clinical features and the radiographic evidence lead to the diagnosis of cruciate ligament rupture in the camel. Because of the large size and weight of this species, surgery for cruciate ligament repair was not attempted.

Rupture of the Round Ligament of the coxofemoral Joint in a Camel

N. R. Purohit, D. S. Chouhan, R, J. Choudhury

Deptt. of Surgery & Radiology, College of Vety & Animal Science, Bikaner (Rajasthan).

A camel was presented with the rupture of the round ligament of the right coxofemoral joint. Clinical examinations revealed characteristic signs of the round ligament rupture i.e. toe-out, stifle-out and hock-in appearance of the affected right hind limb and both the hind limbs were of the same length. Some crepitation was also palpated over the joint. Stabilization of the joint could not be attempted.

A Comparative Study on Ostoinductive and Healing Process of Fresh Avascular Autogenous and Homogenous Bone Grafts in Bovine

Gaj Raj Singh and I. V. Mogha

Division of Expt. Med. & Surgery I.V.R.I., Izatnagar-243 122.

Twelve trials in respect of fresh autogenous (6) and fresh homogenous (6) cortical bone grafting were conducted in calves. The radiographs taken at different intervals demonstrated that all the autogenous grafts were accepted as such and no sign of new bone formation was present. It was further observed that grafts did not undergo necrosis. Homogenous avascular cortical bone grafts showed areas of osteolysis at later stages, indicating rejection of homogenous grafts. The radiographs taken at later stages showed presence of new bone formation around the graft and subsequently the homogenous grafts were replaced by newly formed bone.

Use of Horn Plates in Long Bone Fractures in Bovine-A Long Term Radiological study.

Gaj Raj Singh and Harpal Singh

Deptt. of Surgery & Radiology, College of Vety. Sciences, Pantnagar Nainital (U.P.)

Bone plates prepared from bovine horn were evaluated and compared with stainless steel plates in the treatment of metacarpus and radius fractures in 24 clinically healthy $1\frac{1}{2}$ to 2 years old cow calves, in four groups (A, B, C and D) of six animals each. Horn Plates and stainless steel plates were used to immobilize the fracture of metacarpus in animals of groups A and B respectively. Where as in animals Of other two groups (C and D) fractures of radius and ulna were created and immobilized with double horn plates and double stainless steel plates respectively. Radiographs were taken at different intervals upto one year. The radiographs were evaluated for periosteal reaction, type and size of callus, infection, integrity of plates and screws and change in the thickness and density of the cortex underneath the plates. The horn plate appeared to be completely inert as the bone and surrounding soft tissue did not show any sign of foreign body reaction even upto the period of one year.

Surgical Management of a Bilateral Horizontal Rami and Unilateral Vertical Ramus Fracture in a Bullock

T. K. Gahlot, S. K. Chawla and D. Krishnamurthy.

Deptt. of Surgery & Radiology College. of Vety. Science, Haryana Agril. University, Hisar.

A bullock, aged 10 years was referred to Department of Surgery and Radiology with history of hanging anterior portion of lower jaw, protrusion of tongue and inability to drink and eat. Clinical examination revealed a bilateral mandibular fracture of horizontal ramus but radiographically it revealed unusually significant gap in levels of left and right ramus, therefore a lateral view of vertical rami region was also taken. It revealed an oblique fracture of vertical ramus which caused respective horizontal ramus to drop down in level. Vertical ramus fracture was reduced by open method and immobilized by plating whereas horizontal rami were reduced by closed method and immobilized by transfixation with plaster of paris cast. Animal was put under gruel diet for 7 weeks. Animal had uneventful healing and transfixation device was removed following clinical and radiographic union after seven weeks. Vertical ramus also had a satisfactory and uneventful healing. Animal could attain its normal prehension and mastication activities.

Histomorphological studies of Compression Osteosynthesis for Radial and Ulnar Fracture in Goats .

B. A. Buchoo, P. N. Sahay and J. Prasad

Deptt. of Surgery, Ranchi Vety. College, Birsa Agril. University, Ranchi.

Compression osteosynthesis for the repair of radial and ulnar fractures by employing stainless steel AO type narrow compression plates was accomplished and compared with conventional technique of plaster cast immobilization in 12 adult Black Bengal goats. Histomorphological study revealed that compression technique induced the process of early and organized callus formation resulting in complete union by 6 weeks. Early initiation of osteogenic process was chiefly due to rigid immobilization and close apposition of the fractured ends. The histological picture of delayed union was conspicuous in the plaster cast immobilization. The histomorphological findings corroborated the clinicoradiographic features in this regard,

Repair of Tibial Fracture by Intramedullary Pinning in a Horse :

S. S. Singh J. S. Muttu, Khushpalinder Singh and S. S. Rathore

Deptt. of Surgery & Radiology Punjab Agril. University, Ludhiana-141 004.

Mid shaft fracture of tibia in a $7\frac{1}{2}$ years old horse was repaired by intramedullary pinning using steinman pin. The pin was introduced from the proximal end just adjacent to the tibial tuberosity. Adequate immobilization was achieved by intramedullary pin. Post operatively the case progressed well and recovery was satisfactory.

Use of Miniplaster Cast and Leather Boot after Tibial Transfixation in Bovines

Devood Sharifi and S. N. Sharma,

Deptt. of Surgery & Radiology, Punjab Agril. University, Ludhiana - 141 004.

Simple tibial fractures were created under deep narcosis in 20 clinically healthy cross-bred Calves. For tibial transfixation local infiltration analgesia was additionally employed. Animals were randomly divided into two groups. In the 2nd group miniplaster cast and special designed leather boots were used where as the 1st group was kept without support. Both miniplaster cast and the boot were allowed to stay on for a fortnight at least. Results were significant and immediately rewarding. No fetlock flexion or its sinking occurred. Animals balanced weight better stood squarely and utilized the limb early.

Investigation of Incidence of Foot Diseases in Dairy Cattle of Andhra Pradesh .

R. V. Rama Rao

Veterinary polyclinics, Seetharmpet, Hyderabad 533 001, (Andhrapradesh)

A survey of 1,28,267 animals revealed that 5,015 animals (3.9%) were suffering from foot diseases. The survey included animals for slaughter from abattoirs. It was found that the diseases affecting bovine foot in Andhra Pradesh are overgrown hooves, punctured sole and pus, interdigital growth and foul in foot. The etiology and possible surgical treatment are discussed. Based on survey work, clinical and radiographic studies it was concluded that a high percentage of incidence of bovine foot diseases was observed in the state in general and in Andhra and Rayalaseema in particular.

Effects of Thoracic Limb Tourniquet Ischemia on Local and Systemic Acid-Base and Blood Gases in Donkey

A. P. Singh, T. A. Abid and M. S. AL-Badrany

*Deptt. of Medicine, Surgery and obstetrics., College of Vety Medicine,
University of Mosul, Mosul, Iraq.*

Effects of thoracic limb tourniquet ischemia of 90 minutes duration were investigated in 6 adult donkeys of either sex. Studies were also conducted upto 30 minutes after tourniquet release. Parameters investigated were P^H , PCO_2 , PO_2 oxygen saturation and HCO_3^- . No alteration in these parameters were noted in systemic arterial circulation upto 90 minutes of ischemia. However, tourniquet ischemia resulted in severe local venous acidemia with a significant increase in PC_2 and a nonsignificant decrease in HCO_3^- in the affected limb. There was a significant fall in PCO_2 and oxygen saturation. The release of tourniquet after 90 minutes caused increase in local limb venous P^H with a appreciable fall in PCO_2 . Limb venous PO_2 and oxygen saturation increased significantly after tourniquet release indicating poor oxygen exchange and utilization upto 30 minutes.

Amputation of hind leg in a Breeding Rabbit

Mohinder Singh, S. K. Sharma, R. L. Bhardwaj and N. K. Vashist.

Deptt. of Surgery & Gynaecology, College of Vety. and Animal Sciences, HP Krishi Vishwa Vidyalaya, Palampur (HP)

A Angora rabbit of 7 months of age was brought to HPKVV Veterinary Clinics with complicated fracture of distal end of right tibia from the last two days. After clinical examination, it was decided to amputate the leg. Amputation was performed under thiopentone sodium and local infiltration analgesia. Animal recovered without any complication.

Surgical Management of Separation of the Distal Femoral Epiphysis in Canine :

A. K. Srivastava, Ram Janam Singh.

i/c Canine Therapy Unit, Lucknow, Director Animal Husbandry, U. P.

Various clinical cases of separation of the distal femoral epiphysis in Canine were investigated. To retain the epiphysis in place, several methods were applied. (i) A short pin of appropriate size was introduced from the trochlear groove into the shaft of the femur. (ii) Immobilization was accomplished by inserting two orthopaedic staples of appropriate size, one on the lateral and other on the medial aspect. (iii) A figure eight wire had been used with the site, (iv) Rush pins (two) were inserted in large breeds of dogs, (v) An intramedullary pin was passed out through the cranial surface of the femur and between the muscles. Out of all these techniques, the first one was the best. The other three techniques have a disadvantage in that the staples or wire or rush pins must be removed as soon as union of the fracture is complete; leads into reopening of joint. The operative procedure, repair process and observation findings are discussed.

A Case of Tibiotarsal Fracture in a Bar Headed Goose.

Syed Sajjad Hussain, B. A. Moulvi, M. M. Shams-uz-Zaman, & B. A. Bachoo

Deptt. of Surgery & Radiology, Faculty of Vety. Sciences and A. H., Sher-e-kashmir University of Agril. Sciences and Tech. Nowshehra, Srinagar 190 011

A one year old Bar Headed Goose of wild life Department suffering from a compound, communicated fracture of left tibiotarsal bone was presented. The bone was repaired with stainless steel suture and leg was immobilized using card board splints. After 2 months arthrodesis of the tarsal joint had taken place.

Some Biochemical Changes in Chronic Sub-Luxation of Patella in Bovines

P. S. Solanki ; S. C. Ojha, and V. P. Vadodaria,

College of Vety. Science and A.H., Gujarat Agril. University, Sardar Krishinagar, -385 506.

Serum uric acid, total protein and calcium level were estimated in 41 cases of chronic sub-luxation of patella in adult cattle and buffaloes. A significant increase ($P < 0.01$) in serum uric acid was recorded while the changes in levels of total protein and calcium were nonsignificant. Increased level of uric acid suggest for its possible role in the etiopathology of this malady.

Influence of Floor Conditions on Foot Diseases

J. Saikia, K. K. Sarma, S. N. Gogoi, S. C. Pathak.

*Deptt. of Surgery & Radiology, College of Vety. Science,
Khanapara, Guwahati-22.*

Ten types of floor of the byres were surveyed in respect to the foot affections. Maximum percentage of foot affections were found in the byre with the floor type of brick at back and soil front with wet conditions (62.50%). Least incidence was found in catcha floor, where the animals were allowed for grazing whole day (1.39%). There was no incidence in the byre of concrete floor where animals were allowed open grazing.

Incidence of Foot Diseases in Assam

J. Saikia, B. Sarma, S. N. Gogoi, S. C. Pathak.

*Deptt. of Surgery & Radiology, College of Vety. Science
Khanapara, Guwahati-22.*

Out of 3008 numbers of total animals surveyed 420 (13.97%) number of animals were found to suffer from hoof affections. Male being 13.34% and female being 13.99% affected. Breed involves are Jersey cross (18.02%) Red dane cross (14.51%), Sindhi cross (17.22%), Friesian cross (17.41%) local cross (1.72%). More affected animals are 4-6 years of age (33.57%). Fore limbs were more affected (66.18%). Highest percentage observed was regular over growth of hooves (53.81%). Other types of hoof affections were also recorded.

SESSION III

(Experimental Surgery)

Chairman—Dr. J. M. Nigam

Rapporteur—Dr. P. K. Bose

SESSION III

(Experimental Surgery)

Rapporteur—Dr. P. K. Bose

Chairman—Dr. J. M. Nigam

Arterial Anastomosis and Evaluation of Different Suturing Technique in Bovine

J. G. Singh, Satyendra Kumar,

Deptt. of Surgery & Radiology, B.V. College, Patna-14.

Arterial anastomosis by two different techniques was studied in 16 buffalo calves which were divided into two equal groups. In group A, continuous over and over sutures was employed for anastomosing experimentally resected carotid and median arteries in four animals each, while in group B continuous everting mattress sutures were applied similarly. by 5/0 arterial silk armoured with round bodied atraumatic needle was used for the purpose. The success of experimentation was assassed on the basis of observations made up to a period of 15 days. The present study reveals the superiority of continuous over and over sutures which could be successfully applied for the repairs of major damaged arteries in large

Ligation of Mesentric Vessels and their Response on Intestinal Healing in Bovines .

I. V. Mogha, G. R. Singh and A. K. Sharma

Division of expt. Med. & Surgery, I.V.R.I., Izatnagar (U.P.)-243122.

Sixty intestinal anastomosis were performed and repaired by lembert Inverting technique in two different group of animals, after secrifying 70-80% blood supply to the operated area in 1st group and sacrificed alternately (25-50% reduction in vascular supply) in 2nd group. Clinical signs along with temperature, pulse and respiration were recorded and found under normal limit. Histopathological and radiological findings are discussed,

Histamine and Serotonin Level in Intestinal Trauma in Goats :

I. V. Mogha, H. P. Singh and Amresh Kumar.

*Deptt. of Surgery & Radiology, College of Vety Science, G.B.Pant University,
Pantnagar Nainital. (U. P.)*

Eighty intestinal anastomosis were performed (5 in each animal) in 16 adult healthy goats. Biopsies were collected on day zero, 1st, 3rd, 5th, 7th, 15th, 21st and 28th postoperatively for histamine and serotonin estimation in traumatized tissue, and histopathological observation. Grossly adhesions were observed during biopsy collection. Histopathological observation revealed edema and of polymorphonuclear cells infiltration at anastomotic sites in early days of surgery. Mucosal healing was seen on 7th P.O. day whereas serosal continuity started on 3rd P.O. day with minimum tissue reaction. Significant increase in histamine level in healed intestinal tissues were observed than normal tissue. No marked change in serotonin level in intestinal tissue post trauma was observed.

Experimental Studies on Ileo-Caecal Shunt in Equine (Equus Asinus) : Part-III : Effect on Digestibility .

V. P. Chandrapuria, N. N. Pathak and A. K. Bhargava

Division of Expt. Med. and Surgery, I.V.R.I., Izatnagar (U.P)

The long term studies on the digestibility of various proximate nutrients following ileocaecal shunt and other two techniques of ileal resection and ileo-caecal anastomosis and caeectomy respectively were evaluated on 12 healthy male donkeys of four to six years age. Digestibility of proximate nutrients were not much affected following any of three surgical techniques except the crude fiber digestion. Digestibility of crude fiber was reduced significantly ($P < 0.05$), about 8-14 percent in all the groups when compared with the control,

Opacity of Cornea and its Management in Experimental Cross-Bred Calves

J. N. Mistry, and D. M. Tadkod,

*College of Vety, Science and A.H., Gujarat Agril. University,
Sardar Krishinagar 385 506*

Opacity of cornea, were created in sixteen crossbred experimental calves, using scarification of cornea with the needle, and application of the milk of the "Akada" (Aak Calotropis Procera). Opacity of cornea resulted within 24 hours in all the animals. These animals were then divided in three groups of five, six and five animals each. The first group of five animals were treated with $\frac{1}{4}$ ml of autoblood in to palpable conjunctiva. The second group of six animals were treated with daily application of "Pendistrin-SH" ointment. The third group was kept as control. In the first group of animals the opacity was cleared with one injection of autoblood within 3-5 days. The "Pendistrin-SH" group took 5-12 days for the clearance of opacity. In control group in one of the animals ulceration resulted and in the remaining animals the opacity cleared within 7 to 12 days.

Opacity of Cornea and its Management in Experimental Cross-Bred Calves

P. V., Parikh J. N. Mistry and D. M. Tadkod

*College of Vety. Science and A.H., Gujarat Agril. University, Sardar Krishinagar-385 506
(B.K.) Gujarat*

Opacity of cornea was created in fifteen crossbred calves by scarification of cornea by needle and instilling milk of "Akada" (Aak Calotropis Procera) on it. Opacity resulted within 24 hours. These 15 animals were then divided in to 3 groups of 6, 6 and 3 animals each. In the first group of 6 animals the corneal opacity was treated with daily instillation of Chloramphenicol opticops. The 6 animals of 2nd group, the opacity was treated with insufflation of Borocalomel mixture. The 3 animals of 3' rd group were kept as control. The Chloramphenicol treatment group revealed clearance of opacity of cornea by 5' th to 10' th day. The Boro-calomel mixture treatment group clearance of opacity was within 5 days of the treatment while in to the control group opacity of cornea was cleared by 10' th or 15' th day.

Electrocardiographic Changes During Septic Shock in Cow Calves .

C. S. Celly a and B. Prasad.

Division of Expt. Med. & Surgery, I.V.R.I., Izatnagar, (U.P.)

Septic shock was induced in six clinically healthy male cow calves ranging from 1 to 1½ years of age, by strangulating a 50 cm. segment of jejunum. The arterial supply of this segment was kept intact whereas the venous channels draining this segment were ligated. Animals were observed upto 48 hours. Electrocardiography was done at 0, 12, 24, 36 and 48 hours interval. P wave (amplitude and duration) and PR interval showed a significant decrease from 24 hours onwards. However, mean QRS (duration and amplitude) and T wave (duration and amplitude) showed a significant increase from 24 hours onward. Heart rate also increased significantly from 12 hours onwards. Other electrocardiographic feature included peaked T-wave with the passage of time after strangulation. Four of six animals also showed sinus arrhythmia at 24 and 36 hours post—strangulation.

Haemodynamic Changes Following Coronary Ligation in Calves and Goats

Q. P. Gupta, A. K. Bhargava and Gaj Raj Singh.

Division of Expt. Med. & Surgery, I.V.R.I., Izatnagar, (U.P.)

The study was conducted to see whether coronary occlusion induces any changes in blood pressures and if so how long it takes for myocardium to compensate. The study revealed that coronary circulation in cattle was well compensated by the collaterals, thus failed to demonstrate typical clinical signs of myocardial infarction following coronary ligation, however it is doubted that the goats behaved differently for adaptation by collateral circulation. It is apparent from the data that there is sudden fall in blood pressures recorded from aorta and carotid, immediately following ligation of coronary artery, however, the changes seems to be reversible as pressure returns to nearly normal within 60 minutes.

Evaluation of Local and Parental use of Antibiotics During Laparotomy in Calves

Narinder Singh, S. N. Sarma and M. S. Oberoi

Deptt. of Surgery & Radiology, Punjab Agril. University, Ludhiana-141 004.

Laparotomies were performed under local infiltration analgesia in two groups of calves (5 in each) in standing position. No antibiotic was used in group I. In group II initially streptopenicillin was used locally and parentally. It was followed by the sensitivity based antibiotic (Gentamycin). Post-operative bacterial counts increased significantly in group I and decreased to insignificant levels in group II. Both local and parental use of antibiotic proved effective in controlling post-operative wound infection.

Comparative Clinical Evaluation of Himax and Himax-Iodine as an Accelerator of Wound Healing in Bovine Septic Wounds

S. K. Pandey and M. A. Jaleel

College of Vety. Science & A. H., Jabalpur.

Out of 110 cases of septic wounds (73 buffaloes and 37 cows) of 15 to 30 days duration 70 were treated with himax while 40 were treated with himax-iodine. Every wound was thoroughly cleaned with 5% potassium permanganate before every dressing. No inactivation of himax or himax-iodine was noticed in the presence of pus or other wound fluid. The removal of devitalized tissue was more prompt in himax-iodine treated group as compared to the wounds treated with himax alone. The himax-iodine treated wounds became apparently infection free much earlier than the wounds treated with himax alone and even appearance of normal granulation tissue was faster in himax-iodine treated wounds. The signs of excessive granulation was however apparent in himax-iodine treated wounds when treatment was prolonged. In none of the himax treated wound excessive granulation was noticed.

An Easy and Safe Method of Venipuncture in Guinea Pigs

S. Bhaskara Rao

Institute for Medical Science & Technology, Satelmond Palace, Trivandrum-695,

In Scientific research, although the guinea pig (*Cavia porcellus*) has been a valuable experimental animal, the inaccessibility of veins for sampling and infusions has become a limiting factor on its popular use. Basing on the previous experience on the experimental work of epidemiological nature in pigs on the brain fever studies, where in venipuncture was tried, the use of cranial nerve was explored in more than 20 guinea pigs. It is felt that 'cranial vena cava-venipuncture' is an ideal, easy and safe method and suitable for periodical applications.

Herniorraphy using Homogenous Urinary Bladder Implants in Marino sheep

Syed Sajjad Hussain, B. A. Moulvi, M. M. Shams-us-Zaman and B. A. Bachoo,

*Deptt. of Surgery & Radiology, Faculty of Vety. Science & A. H., Sher-e-Kashmir
University of Agril. Sciences and Tech. Nowshehra, Srinagar 190 011*

Two marino ewes suffering from abdominal hernia were refered to the surgery deptt. The hernial ring was repaired by freshly collected urinary bladders. Two months observations revealed successful acceptance of the implants without complications.

Full Thickness Autogenous Skin Grafting in a Cross Bred Heifer A - Case Report

Syed Sajjad Hussain, B. A. Moulvi, M. M. Shams-uz-Zaman P, Barood and
B. A, Bachoo

*Deptt. of Surgery & Radiology, Faculty of Science & A. H., Shcr-e-Kashmir University
of Agril. Sciences & Technology, Newshehre, Srinagar-190 011 (Ind*

A 24 months old cross bred jersey heifer suffering from a wound in the lateral side of left stifle was presented. The conventional treatment as open wound healing, tried by some local veterinarians, had failed, so autogenous full thickness skin grafting was tried. There were unevenful recovery within 10th post operative days.

Effect of Shaving and Clipping on Microbial Flora of Skin in the Preparation of Surgical Site in Large Animals .

Chaudhury, Sunil, M. M. Shah, and D. M. Tadmok,

*Deptt. of Surgery, College of vety. Science & A. H. Gujarat Agril. University,
Sardar Krishinagar-385 506*

A study in 12 calves was conducted to see the effects of shaving and clipping on microbial flora of skin for the preparation of surgical site.

It was observed that shaving reduced the microbial load on the skin by 90.87 % whereas clipping reduced it by 40.21 %. On further scrubbing the surgical site with savlon the microbial load of the site was reduced by 99.34 % in shaving group and by 97.03 % in clipping group.

A Histopathological and Roentgenological Evaluation of Transthoracic Esophagotomy Techniques in Calves.

T. K. Gahlot, K. Singh, S. K. Chawla, Rishi Tayal, B. M. Jani, Shila Godara and D. Krishnamurthy.

Deptt. of Surgery & Radiology, College of Vety. Sciences, Haryana Agril. University. Hisar.

Transthoracic esophagotomy was performed in twelve calves by longitudinal and rotational esophagotomy techniques. Operations were performed under general anaesthesia and positive pressure ventilation. All the animals were maintained on fluid therapy for one week and thereafter on gruel diet for another two weeks. In a three week study, contrast esophagograms were taken at weekly interval and tissue samples were collected at weekly interval for histopathological examination. Animals were observed for abnormal clinical signs, if any, during this period.

Autogenous Full Thickness Skin Graft in the Repair of Giant Hernias in Buffalo-Calves

U. K. Deokiouliyar, P. N. Sahay, A. A Khan and R. Prasad,

Deptt. of Surgery, Ranchi Vety. College. Birsa Agril. University. Ranchi:

Studies conducted for the repair of giant ventral hernia with autologous full-thickness skin graft over a period of 16 weeks have been presented. Redundant skin from hernial site was obtained and prepared for hernioplasty in onlay and inlay fashion in 12 buffalo calves. Following operation, cutaneous wound showed primary union though seroma was frequently observed and subsided spontaneously. No rejection or sloughing occurred and the skin graft formed firm adhesion to the underlying tissue at the margins. Epidermal surface did not show any adhesion and as such a dead space existed and feasibility of infection could not be precluded. Histologically a good amount of fibrocellular tissue was seen originating from the host tissue and invading the graft through the dermal layer. Epidermis and epithelial elements exhibited gradual degeneration and desquamation and these were more marked and early in inlay graft. By 8 weeks the consistency and thickness of fibrocellular mass had increased and by 16 weeks the entire graft had metamorphosed and consisted of collagenous tissue with vessels, fibroblasts and cellular infiltration in between. Autologous skin exhibited a good potential for hernioplasty.

Biochemical Studies following Uroperitoneum and after Treatment in Buffalo Calves

A. P. Bhokre, P. T. Hachao and S. M. Usturge

Deptt. of Surgery M. A. U. Parbhani-431402

Experimental induction of uroperitoneum was created in 30 buffalo calves divided in 5 equal groups. The biochemical constituents such as sodium, potassium, chloride, calcium inorganic phosphorus and blood urea nitrogen were determined in both the blood serum and dialysate at various intervals before and after treatment. No treatment was given to animals in Group I. Intravenous fluid therapy with balanced electrolyte solution was administered to animals in Group II. Animals in Group III were treated with peritoneal dialysis employing same electrolyte solution used in Group II, while animals in Group IV and V received peritoneal dialysis by Ringer's lactate and normal saline solutions, respectively. The various treatments adopted showed no significant change in restoration of biochemical abnormalities except BUN which was stabilised to normal level by peritoneal dialysis only.

Laminitis in Buffalo Calves - An Experimental Study

J.C. Lekharu, I. S. Chandna, A. P. Singh and Jit Singh

Deptt. of Surgery & Radiology, College of Vety. Science, H. A. U. Hisar.

An attempt was made to induce laminitis in Buffalo calves by intraruminal injection of recemic mixture of lactic acid at two different dose rate (0.5% - gr. 'a' and 0.75% gr. 'b' of body wt.) Typical clinical signs of laminitis like arch back, reluctant to move and recumbency with stretching of the hind limb were seen. Clinical signs were more prominent in gr. b.

It is concluded from the above study that laminitis can be produced experimentally by injecting the above mixture.

Biochemical Studies Following Uroprothionum and after Treatment in Buffalo Calves

A. P. Bhatia, P. F. Hachin and S. M. Usturog

Dept. of Surgery, M. A. I. Pathan-131402

Experimental induction of uroprothionum was created in 30 buffalo calves divided in 3 equal groups. The biochemical constituents such as sodium, potassium, chloride, calcium, inorganic phosphorus and blood urea nitrogen were determined in both the blood serum and dialysate at various intervals before and after treatment. No treatment was given to animals in Group I. Intravenous fluid therapy with balanced electrolyte solution was administered to animals in Group II. Animals in Group III were treated with balanced dialysis employing same electrolyte solution used in Group II, while animals in Group IV and V received balanced dialysis by using a lactate and normal saline solutions respectively. The various treatments applied showed no significant change in restoration of biochemical abnormalities except BUN which was established to normal level by balanced dialysis only.

Taminitis in Buffalo Calves - An Experimental Study

J. C. Lakshmi, J. S. Chandra, A. P. Singh and Jit Singh

Dept. of Surgery, Pathan College of Veterinary Science, M. A. I. Pathan

An attempt was made to induce taminitis in Buffalo calves by intramural injection of tannic mixture of tannic acid at two different dose rates (0.5% and 0.75% of body wt). Typical clinical signs of taminitis like arch back, reluctance to move and redundancy with stretching of the hind limb were seen. Clinical signs were more prominent in 0.75%.

It is concluded from the above study that taminitis can be produced experimentally by injecting the above mixture.

Amresh Kumar

SESSION IV

Dept. of Surgery, ...

Regional analgesia of hand with 10 ml of 4% lidocaine with and 2% procaine ... were studied in sixteen patients divided into two equal groups. The time taken to onset of anaesthesia was in group A 10-15 min and in group B 15-20 min after 90-120 min tourniquet was removed and time taken in return of sensation for bearing weight were recorded, which came to 15-20 min in group A and 20-30 min in group B. The onset of analgesia in group A was 10-12 min and in group B 15-20 min. ...

Comparative Evaluation of three Different Techniques of Analgesia of (Anaesthesiology)

A. B. Mahale and C. C. Wakankar

... College, Bombay-400 012

Three trials for each technique namely fundamental, epineural injection, subcutaneous epineural injection and regional nerve block in which were carried out for analgesia of hand under for the first two techniques 2% Cocaine in the dose of 0.2 ml/kg body weight was used whereas for the regional nerve block 3 ml of 2% lidocaine at each nerve was injected. It was observed that fundamental epineural analgesia was easier, quicker and ... compared to the other two techniques. It gave consistent and 100% results. ... with regional nerve block the technique was time consuming ... and large amount of material was required to maintain analgesia for duration of procedure.

Chairman—Dr. Amresh Kumar

Rapporteur—Dr. S. K. Pandey

SESSION IV

(Anesthesiology)

Chairman—Dr. Animesh Kumar

Reporters—Dr. S. K. Pandey

Regional Analgesia of Hind limb in Buffalo Calves.

Satyendra Kumar

Deptt. of Surgery & Radiology, B. V. College, Patna-14

Regional analgesia of hind limb with 10 ml of 4% lignocaine Hcl and 2% procaine Hcl were studied in sixteen buffalo calves divided into two equal groups. The time taken in onset of anaesthesia was in group A 10-15 mts and in group B 15-20 mts. After 90-120 mts tourniquete was removed and time taken in return of sensation for bearing weight were recorded, which came to 15-20 mts in group A and 5-10 mts in group B. The period of analgesia in group A was 110-120 mts and in group B 80-90 mts. Simple operation like skin incision and its reposition, amputation, fracture repair etc. could be performed with minimum bleeding, complete anaesthetic effect and adequate muscular relaxation.

Comparative Evaluation of three Different Techniqe of Analgesia of Goat's Udder

A. R. Mahale and C. C. Wakankar,

Bombay Vety. College, Bombay-400 012

Fifteen trials for each technique namely lumbosacral epidural injection, sacrococcygeal epidural injection and regional nerve block of udder were carried out for analgesia of goat's udder. For the first two techniques 2% Gesicain at the rate of 0.4 ml/kg body weight was used whereas for the regional nerve block, 3 ml of 2% Gesicain at each nerve was injected. It was observed that lumbosacral epidural analgesia was easier, quicker and effective as compared to the other two techniques. It gave consistant and 100% results. Results though 100% with regional nerve block. the technique was time consuming, required fair amount of practice and large amount of local anaesthetic and provided a shorter duration of analgesia insufficient for mastectomy.

Repair of Diaphragmatic Hernia in Buffaloes under Local Anaesthesia with Sedation-An unsuccessful attempt.

Rishi Tayal, Kuldip Singh, Sukhbir Singh, Mohinder Singh, S. K. Sharma and
D. Krishnamurthy

*Deptt. of Surgery, & Radiology, College of Vety. Science, Haryana Agril.
University, Hisar.*

Diaphragmatic herniorrhaphy under local analgesia with sedation was attempted in four she-buffaloes. Out of four only one animal survived. Two animals died due to collapse of both lungs because of mediastinal rupture while the third one died probably due to hypotension and shock. It was concluded that repair of rent in diaphragm under local analgesia with sedation is not at all safe and unless a large number of cases are operated upon successfully it is not worth to advocate and recommend this technique to be performed under field condition.

Studies on Serum Enzymic profiles following Visceral Procain Blockade Lumbar Epidural and Local Infiltration Anaesthesia in Buffalo Calves.

A. J. Dhami, M. A. Malek, D. R. Barvaliya and M. R. Patel

*Deptt. of Surgery & Radiology, Gujarat Vety. College, GAU,
Anand-388001*

A comparative clinical and enzymic study was undertaken on the efficacy of visceral procain blockade, lumbar epidural anaesthesia and local infiltration anaesthesia in 18 buffalo calves aged between 6-8 months divided into three groups of 6 animals each. All the three anaesthetic procedures followed were sufficient enough to perform painless surgery like enterotomy, intestinal anastomosis and abomasotomy. Clinical changes with regards to temperature, pulse and respiration were found to be statistically nonsignificant in all the three groups. The serum enzymic profiles studied just before, and 30 min. and 60 min. after the anaesthesia, revealed significant increase in the serum glutamic pyruvic transaminase levels only in visceral procain group at 60 min. But elevation in serum glutamic oxaloacetic transaminase levels was no significant effect on the levels of serum alkaline phosphatase, serum acid phosphatase and lactic dehydrogenase levels in any of the three groups and the levels were found to decrease at 30 min and 60 min. after anaesthesia in all the three groups. In general, visceral, procain blockade was superior to other two procedures.

Studies on the Haemodynamic of Bovine Calves under Halothane Anaesthesia

K. K. Sarma, S. C. Pathak and J. Saikia

Deptt. of Surgery & Radiology, College of Vety. Science, Khanapara : Guwahati-22.

Haemodynamics was studied under halothane anaesthesia in eighteen bovine calves divided in three groups. The first was unpremedicated. The 2nd group received premedication of atropine sulphate @ 0.05 mg/kg. and the 3rd group was premedicated with atropine sulphate @ 0.05 mg/kg. and promazine hydrochloride @ 1 mg/kg body weight.

Under halothane anaesthesia, the heart rate and MAP exhibited fall but CVP had a rising tendency with atropine sulphate premedication. The average values of heart rate, MAP, Cardiac output, Stroke volume and stroke indices were increased but a fall of the CVP and PVR were observed. With promazine and atropine combination, some of the values (MAP, CVP, cardiac output and related parameters) were intermediary but a notable tachycardia was characteristic.

Further Studies on Clinical Effects of Pentazocine - Diazepam-Thiopentone in Canine Patients

S. K. Pandey and Vibha Parihar

College of Vety. Sciences & Animal Husbandry, Jabalpur.

The diazepam pentazocine combination was used in 157 dogs of age group between 6 months to 14 years and weighing between 8 kg to 30 kg at the dose rate of 2.5 mg/kg and 4 mg/kg simultaneously but with different syringes after keeping animal off fed for 16 to 22 hours for various surgical interventions. The onset of sleep was noticed within 2 minutes of injection and reached to the maximum depth by 7 minutes. The duration of sleep was for an average of 120 minutes while analgesic effects lasted for 40 minutes. In another 20 bitches diazepam,-pentazocine induced sedation analgesia was deepened with the use of 2.5% thiopentone sodium. The average thiopentone required was 5.68 mg/kg body weight and the duration of anaesthesia was for a period of 47 minutes, however animals remain under sleep for the average duration of 180 minutes. Hypothermia and depressed respiration were the predominanting features while pulse rate was moderately increased during initial period of sedation - analgesia. In none of the cases vomition, retention of urine and blood mixed faecal discharge was noticed.

Chloroform Induced Biochemical Alteration in Buffalo Calves during Surgical Anaesthesia

A. K. Srivastava

Deptt. of Vety. Pharmacology, College of Vety. Science, Punjab Agril. University, Ludhiana.

An attempt has been made to investigate the effect of chloroform on various blood biochemical indices in healthy buffalo calves. The animals were anaesthetised sufficiently by tracheal intubation by IV injection of thiopental sodium (15.3 ± 2.16 mg/kg) and anaesthesia was maintained for one hour with chloroform (0.196 ± 0.02 mg/kg) in Oxygen. Blood samples were collected during anaesthesia and upto 14 days after termination of anaesthesia. There was significant ($P < 0.01$) increase in the plasma levels of aspartate aminotransferase (32-86%), alanine aminotransferase (15-74%), Acid phosphatase (22-64%), alkaline phosphatase (30-79%), lactate dehydrogenase (61-134%) and ATPase (50-93%) enzymes. The maximum effect was observed from 45 to 60 min. during anaesthesia and alterations of blood biochemical parameters persisted even upto 7-14 days. The results of present investigation revealed that in buffalo species it would be unsafe to re-anaesthetise with chloroform within a short duration.

Ketamine Anaesthesia in a Black Panther (*Panthera pardus*) :

V. Ramasamy and B. Ramesh Kumar.

Vety. Clinician Centre, Erode and Livestock Research and Development Centre, Erode.

Ketamine Hydrochloride (Vetalar) was used in combination with Triflupromazine Hydrochloride for the amputation of tail in a black panther.

Premedication with Atropine at the rate of 0.04 mg/kg . body wt . provided smooth induction of general anaesthesia with ketamine Hydrochloride at the rate of 10 mg/kg . body wt .

Ketamine Hydrochloride was found to be useful as a general anaesthetic for short surgical procedures in wild animals due to its smooth onset, short duration of action and smooth recovery .

Phenobarbital : Disposition Analysis and Plasma Protein Binding in Dogs

A. K. Srivastava

*Deptt. of Vety. Pharmacology, College of Vety. Science, Punjab Agril.
University, Ludhiana.*

The present study was, planned to investigate the disposition behavior of phenobarbital in healthy dogs. In addition Plasma protein binding of phenobarbital was also conducted. The animals were given single oral dose of phenobarbital sodium (3 mg / kg body weight). The time course of blood-concentration was adequately described in the term of monoexponential equation: $cp = Be^{-bt} - Ae^{-kat}$. The minimum effective concentration of phenobarbital in blood ($10-25 \text{ ug.ml}^{-1}$) was maintained upto 8-14 hr of administration. The absorption half-life ($t_{\frac{1}{2} Ka}$) and elimination half-life ($t_{\frac{1}{2} B}$) were 29.63 ± 7.58 min. and 75.3 ± 22.8 hr, respectively. The apparent volume of distribution [Vd (area)] and total clearance (ClB) were calculated to be $0.721 \pm 0.154 \text{ L}^\circ \text{ kg}^{-1}$ and $0.125 \pm 0.043 \text{ ml. kg}^{-1}, \text{ h}^{-1}$, respectively. Phenobarbital binds with plasma proteins of dog to the extent of $58.3 \pm 9.52\%$. The capacity of plasma proteins to bind with phenobarbital (Bi) and dissociation rate constant of protein-drug complex (KB) were calculated to be $23.52 \times 10^{-6} \text{ mol. g}^{-1}$ and $7.64 \times 0.34 \times 10^{-4} \pm \text{mol.}$ respectively.

Droperidol With and Without Atropine as Tranquilizer in Goats

Bharat Singh and Amresh Kumar

*Deptt. of Surgery, & Radiology, College of Vety. Science, G.B. Pant University
Pantnagar (Nainital)*

The onset of tranquilization after intravenous administration of droperidol @ 2 mg/kg body weight occurred in 3.125 ± 1.314 minutes and the analgesic effects lasted for 45.00 ± 3.304 minutes. The complete recovery occurred in 73.25 ± 23.93 minutes. Pre-administration of atropine @ 0.50 mg/kg body weight 15 minutes prior to droperidol administration non-significantly delayed the onset of analgesia and slightly prolonged the duration of tranquilization. However complete recovery was slightly hastened. There was an initial increase ($P > 0.05$) in heart rate and respiration rate at 5 minutes after droperidol injection which lasted for 120 minutes, while atropine pre-treatment produced a significant ($P < 0.05$) increase in heart rate at 5 minutes which remained elevated upto 150 minutes. The changes in temperature, MAP, CVP, QRS complex and other biochemical constituents remained non-significantly altered.

Electroacupuncture Analgesia for Abdominal Surgery in Goats

Awadh Bihari and Amresh Kumar

*College of Vety. Science G. B., Pant University, of Aril. & Tech., Pantnagar,
Dist. Nainital. (U. P.)*

The electrostimulation of acupoints ST-36 or SP-6+ST-36 alongwith stimulation at acupoint GV-20 produced analgesia of flank, ventral abdomen, upper and lower medial aspect of thigh and plevic and perineal regions including anus and vulva. The extent of analgesia varied from mild to moderate in animals given electrostimulation at acupoint SP-6+ GV-20 and ST-36 + GV-20 whereas their combined stimulation produced complete densensitization of flank, limb upto stiffle and lateral aspect of hip. The onset of effects varied form 17 to 20 minutes and duration of analgesia from 17.50 to 23 minutes. The electroacupuncture analgesia caused a significant increase ($P < 0.05$) in heart rate, respiration rate with a non-significant increase in rectal temperature ($P > 0.05$). Mean arterial blood pressure was slightly decreased and there was no significant effect on ECG, Haemocytological and biochemical changes included, increase in number of erythrocytes, leucocytes, Hb percentage, PCV, neutrophillia and lymphocytopaenia. There was a significant increase in total proteins and glucose, Serum electrolytes (Na^+ , K^+ and CL^-) were not significantly effected. The electrostimulation of acupoints ST-36, SP-6 and GV-20 permitted successful completion of laparotomy, caesarean section, cystotomy, and rumenotomy, The recovery in all the animals was quick and occurred in 7 minutes after discontinuation of electrical stimulation and no complication could be observed in any animal.

Evaluation of combelen as Tranquilizer in Buffalo Calves

Pankaj Mohan and Harpal Singh

Deptt. of Surgery & Radiology, College of Vety. Science, G. B Pant Univ. of Agril. & Tech. Pantnagar 263145 (UP)

The analgesic and tranquilizing effects of combelen (3-propionyl-10 (r-dimethyl-amino-propyl) phenothiazine) @ 1 mg/25kg and 2 mg/25 kg body weight by intramuscular or intravenous were studied in 16 buffalo calves equally divided into 4 groups. In all the groups combelen produced peak tranquilizing and analgesic effects for an average of 100.50 ± 9.57 minutes and complete recovery occurred in 367.50 ± 12.58 minutes, however, the extent of muscle relaxation was greater in the animals where combelen was injected @ 2 mg/25 kg body weight intramuscularly. A significant reduction in ruminal motility, heart rate, respiration rate, rectal temperature and mean arterial blood pressure was recorded. A significant decrease PCV was observed after combelen administration in 2 mg dose groups. The intramuscular administration of combelen @ 2 mg/25 kg body weight produced desirable analgesic and tranquilizing effects in buffalo calves.

Effect of Diazepam, Pentazocine and Procaine Hydrochloride with Thiopentone Sodium as a General Anaesthetic in Dogs Haematological and Biochemical Study

H.J. Solanki, M. N. Mannari

Veterinary Dispensary, Dharampur 396 050, Dist. Valsad, Gujrat

The effect of Diazepam, Pentazocine and Procaine hydrochloride as maintenance agents in Thiopentone sodium anaesthesia were evaluated in three different groups of mongrel dogs preanaesthetized with Atropine sulphate. Significant decrease in PCV, TEC and Hb concentrations at the peak of anaesthesia from preanaesthetic values, in all three groups, both with and without surgery were noticed. However, these values did not differ significantly at 24 and 48 hours of anaesthesia. Statistically significant increase in TLC values with significant neutrophilia and corresponding lymphocytopenia were observed only at 24 and 48 hours of anaesthesia, in all three groups, where surgery was undertaken. Significant increase in blood glucose values, at the peak and at 48 hours of anaesthesia was revealed in all three groups where surgery was not performed. BUN value increased significantly at 48 hours of anaesthesia in procaine group where surgery was not performed.

Effect of Ketamine -Diazepam - Glycerylguaiacolate Anaesthesia and Its Suitability for Orthopaedic Surgery in Calves

Khushpalinder Singh, S. N. Sharma, K. K. Mirakhur, V. K. Sobti
and Sukhpal Singh

Punjab Agril. University, Deptt. of Surgery & Radiology, Ludhiana-141 004,

A mixture of Diazepam-Glycerylguaiacolate (5% glycerylguaiacolate and 0.05% Diazepam in 5% dextrose) was administered intravenously for induction of anaesthesia in 10 clinically healthy calves. Subsequently, ketamine hydrochloride (5.49 mg/kg body wt.) was administered slow intravenously. Bone surgery (Transfixation of tibia fracture) was performed only in 5 of the 10 calves used. The study indicated that diazepam helps to reduce the dose of glycerylguaiacolate. On the other hand, use of glycerylguaiacolate caused marked reduction in the dose of ketamine than diazepam. The induction and recovery were smooth. Heart rate increased significantly whereas MAP and CVP decreased. E.C.G. changes comprised a significant increase in Q.R.S. amplitude and decrease in PR and QT interval and PR segment. The combination resulted in respiratory acidosis and significant arterial hypoxaemia. The PCV, Hb, TEC, TLC DLC, Na⁺ and Cl⁻ did not show any change but the plasma K⁺ decreased significantly. A significant increase in plasma glucose was also observed. The combination resulted in profound muscle relaxation and considered very useful for bone surgery but its use is cautioned especially in animals with existing respiratory disease.

SESSION V

(Clinical Surgery)

Chairman—Dr. O. Ramakrishna

Rapporteur—Dr. D.C.Dhablania

SESSION V

(Clinical Surgery)

Report on—Dr. D.C. Dhillon

Chairman—Dr. O. W. Marshall

Double Venterolateral Abdominal Hernia in Gaddi Ewe A Case Report

S. K. Sharma, N. K. Vashist, Mohinder Singh and R. L. Bhardwaj.

*Deptt. of Surgery & Gynaecology, College of Vety. & Animal Sciences,
HPKVV, Palampur (HP).*

An unusual case of double ventrolateral abdominal hernia in a Gaddi ewe was presented at Vety. Clinics, HPKVV, Palampur. The development of hernias was sudden. Surgical correction of the anomaly is discussed.

Extra Luminal Deudenal Lipoma in a Jersey Cow. A Case Report

R. L. Bhardwaj, Mohinder Singh, S. K. Sharma, V. K. Gupta and N. K. Vashist.

*Deptt. of Surgery & Gynaecology, College of Vety. & Animal Sciences,
HPKVV, Palampur (HP)*

Extra luminal Deudenal lipoma in a jersey cow is discussed. There was suspended defecation, anorexia for the last 4-5 days. The animal was operated upon one week back for traumatic reticulitis. The animal passed gases on rectal examination. Right side laparotomy was done and about 6" part of deudenum, just at junction with abomasum was removed along with tumorous part. Histopathology revealed case of lipoma. Conventional post operative care of animal was advised. The animal passed faeces in the very next day. However, despite the treatment the animal was not able to get up and died on 9th post operative day.

Unusual Fibrotic Myopathy in a Camel .

N. R. Purohit, D. S. Chouhan and R. J. Choudhary .

*Deptt. of Surgery, & Radiology, College of Vety. & Animal Science ,
Bikaner (Rajasthan).*

A camel with unusual fibrotic myopathy involving the muscles of the left thigh region was presented . There was no history of trauma . Clinical examination revealed lameness in the left hind limb with the swelling of the muscles of the posteromedial aspect of the left thigh region . The swelling was very firm and tense . A typical fibrous tearing sound was produced when exploratory needle puncture was done at different sites in the affected region . Various possibilities and probable treatment of this myopathy in camel is discussed .

Windgall in a Camel .

N. R. Purohit, D. C. Chouhan, R. J. Choudhary and K. S. Deora.

*Deptt. of Surgery & Radiology . College of Vety & Animal Science , ,
Bikaner (Rajasthan).*

An adult camel was presented with a windgall on the posterolateral aspect approximately 3" below the point of hock . The swelling was approximately tennis ball size but not accompanied by heat , pain or lameness . Surgically the windgall was excised and the healing was uneventful .

Cutaneous Fibromas in Camel .

N. R. Purohit, D. S. Chouhan, R. J. Choudhary and P. R. Dudi

*Deptt. of Surgery & Radiology ,College of Vety. & Animal Science ,
Bikaner (Rajasthan).*

Five camels of the age 5-9 years were presented with cutaneous fibroma varying from 6 to 18 cm in diameter . The fibromas were 1-4 years old, located at different sites viz . face, chest, pad, thoracic wall, abdomen and on the limb . The growths were surgically excised and histopathological examination was carried out . There was no recurrence in any case .

Lower Lip Paralysis in Camel .

N. R. Purohit, D. S. Chouhan and R. J. Choudhary

*Deptt. of Surgery & Radiology ,College of Vety. & Animal Science ,
Bikaner (Rajasthan).*

The lower lip paralysis was observed in five adult camels . There was sagging of the lower lip with decreased movement and lack of tone . Drooling of saliva was also noted in few cases . Prehension of food however, was not impaired in most of them but was difficult in one camel . The probable etiology and treatment of this condition is discussed .

Corneal Injury and Repair in Camel A Preliminary Report.

N. R. Purohit; R. J. Choudhury, D. S. Chouhan and P. R. Dudi

*Deptt. of Surgery & Radiology, College of Vety. & Animal Science,
Bikaner (Rajasthan).*

Seven camels were presented with the corneal injuries due to superficial or penetrating foreign body. There was partial or complete thickness corneal laceration. Depending on the duration and extent of the injury the lesions were treated.

Incidence of Dermoid in Calves. A Surgical Correction and Histopathologic Study.

P. K. Bose, Avijit Sarkar, B. B. Das, Subhananda Bhattacharya, S. K. Guha

*Deptt. of Vety. Surgery & Radiology, Faculty of Vety. & Animal Sciences, Bidhan
Chandra Krishi Viswavidyalaya, P. O. Mohanpur, Nadia. West Bengal.*

One bull calf newly castrated was affected with the dermoid of the 18.75 cms (Dimension) developed centrally in the inner lower palpebral border conjoined with the palpebral conjunctive and the third (3) eye lid. It was broad based. It was operated in the right lateral recumbency with tranquilization, local introduction and conduction analgesia (Auriculo palpebral block). Post operative follow up was advised.

Abomaso-Abdominal Fistula following Internal Truma in a Post Parturient Cow.

P. N. Sahay and L. L. Dass.

Deptt. of Surgery, Ranchi Vety. College, Birsa Agril. University, Ranchi.

Different forms of fistulations involving the abomasum, viz omaso - abomasal, abomaso - umbilical, abdomino - abomasal fistula following external trauma and abomasal fistula following perforating ulcers are on record . Internal foreign body trauma initiating the inflammatory and suppurative processes of the abomasal wall, eventually leading to fistula formation appears to be rare . Case-history, surgical management and post-surgical sequele of such a rare case have been discussed in this paper .

Surgical Repair of Eversion of Omasum in a Female Calf.

S. S. Singh, J. S. Mattu, K. K. Mirakhur and S. S. Rathore.

Deptt. of Surgery & Radiology, Punjab Agril. University, Ludhiana 141 004,

Eversion of omasum in 3 $\frac{1}{2}$ months old cross bred female calf was treated sucessfully surgically. Evisceration of omasum resulted following umbilical hernia . Eversion of omasum from the torn omasal wall probably resulted from violent straining by the calf . Animal recovered completely after the operation . It is however, suggested that such a complication need be avoided by early repair of umbilical herina in calves .

Successful Surgical Repair of Diaphragmatic Hernia alongwith Double tear in Diaphragm of a Buffalo.

S. N. Sharma, V. K. Sobti, Sukhpal Singh and Khushpalinder Singh.

Deptt. of Vety. Surgery, & Radiology, Punjab Agril. University, Ludhiana.

An emaciated buffalo aged 7 years with diaphragmatic hernia having triple hernial ring with reticular adhesion was sucessfully treated. The method of treatment is described. The case was cured within 10 days.

Surgical Management of Retracted Rectum and its Stenosis in an Adult Buffalo.

V. K. Sobti, Khushpalinder Singh, P. S. Bansal and S. S. Rathore .

Deptt. of Vety. Surgery & Radiology, Punjab Agril. University, Ludhiana.

A buffalo, aged 5 years, was presented with a small rectal opening (about 1 " diameter) which was about 5 " anterior to the anal opening thereby forming a pouch just adjacent to the anal opening . Under epidural anaesthesia, the rectal area was prepared by douching it with potassium permanganate solution . Through the anus, the rectal opening was widened by a criss-cross incision . The four flaps thus formed were stretched backward and sutured with the anal sphincter in interrupted horizontal mattress pattern using chromic catgut no. 3 . The animal started passing faeces the same day. Post-operatively, the rectal opening thus made was douched with condy's lotion followed by local application of a mixture of Glycerine and Xylocaine Jelly. Tetracyclines were given parenterally. This set of treatment was repeated for a week. The animal showed a satisfactory recovery.

Purulent Pericarditis in Bovines . An Analysis of 12 Clinical Cases .

V. K. Sobti, Khushpalinder Singh, S. N. Sharma, P. S. Bansal,
J. S. Mattu and S. S. Rathore .

Deptt. of Surgery & Radiology, Punjab Agril, University, Ludhiana . 141 004

Nine cows and three buffaloes , aged $3\frac{1}{2}$ years to $8\frac{1}{2}$ years , suffering from purulent pericarditis were included in the report. These were subjected either to (i) repeated thoraco-centesis (ii) thoraco-pericardiotomy a) under local anaesthesia in standing position b) under general anaesthesia in right lateral recumbancy with artificial respiration. The treatment of purulent pericarditis did not seem to be rewarding. Age factor did not appear to affect prognosis. Early diagnosis was though stressed but a rational supporting therapeutic regimen must be evolved for successful outcome of the surgery.

Biochemical Studies in a Case of Omaso-Abomasal Impaction in a Cow .

Sukhpal Singh, K. K. Mirakhur and A. K. Srivastava,

Deptt. of Surgery & Radiology, Punjab Agril. University, Ludhiana.

Haematological and biochemical examination were carried out in a case of omaso abomasal impaction in a cow. Blood electrolyte examination revealed hyponatraemia and hypokalaemia against normal chloride and potassium levels. Enzymetic studies revealed a significant rise in blood levels of aspartate aminotransferase, alanine aminotransferase, acid phosphatase, lactate dehydrogenase and adenosine triphosphatase enzymes, while there was no change in alkaline phosphatase, maleate dehydrogenase enzymes. Post-mortem examination revealed renal and epicardial haemorrhage, congested lungs and liver and highly impacted omasum and abomasum with collapsed intestines.

Thoracopericardiotomy for Removal of Foreign Bodies in Clinical Cases of Bovine under Local Anaesthesia .

S. M. Usturge and A. P. Bhokre .

Marathwada Agril. University, Parbhani.

Five clinical cases of pericarditis confirmed by clinical and radiographic examinations were recorded and treated at Veterinary Polyclinic MAU, Parbhani. Thoracopericardiotomy was performed under chloral hydrous sedation and local anaesthetic infiltration at operative site. The animals were secured in right semilateral position and 5th rib was resected by usual procedure. After opening the thorax and pericardium, the pus was drained out and the foreign bodies were recovered. Pericardium was sutured by interrupted sutures using 1/0 chromic catgut and thorax was closed routinely. Postoperatively the animals were treated with parenteral antibiotics depending upon cultural and sensitivity examination. All but one animal recovered and discharged after removal of sutures on 10th post-operative day.

Intussuception in a Heifer A Case Report

A. C. Varshney and M. M. S. Zama,

College of Vety. Science, G.B. Pant University of Agril. & Tech. Pantnagar.

A 16 months old cross-bred heifer was presented at Clinics (case No.6/6) with the history of recurrent tympany and off feed for last 5 days. It was diagnosed following exploratory laparotomy as a case of intussuception and was treated successfully after removing the affected portion of intestine. The clinical findings and blood picture returned to almost normal physiological range after 10-16 post-operative day.

Congenital Anomalies in Bovine, Ovine and Carpine

A. P. Singh, M. S. Al-Badrany and T. A. Abid

*Deptt. of Medicine, Surgery, and Obstetrics, College of Vety. Medicine,
University of Mosul, Mosul. Iraq*

In the period under study (June 1985 to May. 1987) out of 869 cases, presented to the surgery section 64 were suffering from one or other congenital abnormalities, which accounted for an incidence of 7.36%. Results showed that male were affected more (5.29% = 46/869) than female (2.07% = 18/869) irrespective of species. Congenital abnormalities were recorded maximum in bovine (3.34% = 28/869) followed by ovine (2.30% = 20/869) and caprine (1.72% = 15/869). Various congenital anomalies recorded were atresia ani or atresia ani et recti alone or associated with other abnormalities like rectovaginal fistula, inguinal hernia, anophthalmia, scrotal bifurcation and testicular hypoplasia, urethral agenesis alone or with hypospadias, and urethral diverticulum, meningocele, knuckling, umbilical hernia, patent urachus, cleft palate, corneal dermoids, and epitheliogenesis imperfecta.

Complications of Trans-thoracic Diaphragmatic Herniorrhaphy in Buffaloes.

T. K. Gahlot, D. Krishnamurthy, K. Singh, S. K. Chawla, Sukhbir Singh and Rishi Tayal .

Deptt. of Surgery & Radiology, College of Vety. Science , Haryana Agril. University, Hisar.

A variety of anaesthetic, operative and post-operative complications were observed following transthoracic diaphragmatic herniorrhaphy in 50 clinical cases of she-buffaloes. Strong adhesions of reticulum with lungs, pleura, pericardium, thoracic wall, hernial ring and liver were encountered. Breaking these adhesions posed some operative and post operative complications which were recorded. Some anaesthetic complications recorded related to the procedure of general anaesthesia.

Surgical Management of Corneal Ulcer in Bovine .

B, Sarma, S. C. Pathak and J. Saikia,

Deptt. of Surgery & Radiology, College of Vety. Science, Assam Agril. University, Khanapara : Guwahati-22.

Seventeen no. of animals suffered from corneal ulcer were treated with third eyelid flap and tarsorrhaphy . Eye lids and eye ball were anesthetised by auriculopalpebral and Peterson's blocks with lignocain (2%) for the purpose. There were 85.7 percent cure without complication following tarsorrhaphy . Whereas the third eyelid flap method was able to cure only 70 percent of the cases. The method of tarsorrhaphy was found to be superior as the closure of the eye ball can be maintained as required with complete protection to the eye ball.

Complications of Trans-thoracic Diaphragmatic Herniorrhaphy in Bullae.

K. Gajlot, D. Krishnamurthy, K. Singh, S. K. Chawla, Sukhbir Singh and Rajni Taval.

Dept. of Surgery & Radiology, College of Veterinary Science, Jammu Agricultural University, Jammu, India.

A variety of anasthetic, operative and post-operative complications were observed following trans-thoracic diaphragmatic herniorrhaphy in 50 clinical cases of she-bullae. Strong adhesions of reticulum with lungs, pleura, pericardium, thoracic wall, peritoneum and liver were encountered. Breaking these adhesions posed some operative and post-operative complications which were recorded. Some anasthetic complications recorded related to the procedure of general anaesthesia.

Surgical Management of Corneal Ulcer in Bovine

S. Samra, S. C. Patlak and J. Salda.

Dept. of Surgery & Radiology, College of Veterinary Science, Jammu Agricultural University, Jammu, India.

Seventeen nos. of animals suffered from corneal ulcer were treated with third eyelid flap and tarsorrhaphy. Eye lids and eye ball were anaesthetised by aurocupric and Paterson's blocks with lignocain (2%) for the purpose. There were 85.7% cure without complications following tarsorrhaphy. Whereas the third eyelid method was able to cure only 70 percent of the cases. The method of tarsorrhaphy was found to be superior as the closure of the eye ball can be maintained as long as needed with complete protection to the eye ball.

SESSION VI

(Urogenital Surgery)

Chairman—Dr. D. Krishnamurthy

Rapporteur—Dr. D.M. Tadkod

SESSION VI

(Urological Surgery)

Reported by Dr. D.M. [Name]

Chairman—Dr. D. Kishnamurti

Atresia Ani along with Rectovaginal Fistula in a Gaddi Lamb. A Case Report

S. K. Sharma, R. L. Bhardwaj, Mohinder Singh and N. K. Vashist .

Deptt. of Surgery & Gynaecology, College of Vety. and Animal Sciences, HPKVV, Palampur (HP)

A Gaddi Lamb of 1 month age was brought to HPKVV, Veterinary Clinics with history that animal is passing faeces through vagina for last 20 days. On Clinical examination, it was noticed to be a case of atresia ani along with rectovaginal fistula. Surgical Correction of atresia ani was done under sedation and local epidural analgesia. The animal started passing faeces through anus, the next day conventional postoperative care was done. Sutures were removed after seven days and the owner was advised to bring the animal, if faeces came through vagina.

Repair of Ruptured Urinary Bladder in a Gaddi Ram

Mohinder Singh, R. L. Bhardwaj, S. K. Sharma and N. K. Vashist .

Deptt. of Surgery & Gynaecology, College, of Vety. & Animal Sciences, HP Krishi Vishwa Vidyalaya, Palampur (HP)

A Gaddi Ram of 2 years was presented to HPKVV, Veterinary Clinics with a distended abdomen and history of not passing urine from the last two days. The clinical examination revealed the rupture of urinary bladder, which was confirmed by paracentesis abdominus. Post scrotal urethrotomy was performed under sedation and local infiltration analgesia to remove the urethral calculi and catheterisation of urethra could not be taken up due to severe urethritis. Ruptured bladder was repaired through left prepubic paramedian approach. Retrograde catheterisation was also attempted after flushing the urethra but remained unsuccessful.

A New Approach for the Surgical Sterilisation in Bitches by Vaginal Route .

A.K. Srivastava and Ram Janam Singh.

i/c . Canine Therapy Unit, Lucknow, Director Animal Husbandry, (U.P.)

In certain circumstances, it may be advisable to perform the operation of sterilisation by the vaginal route. Vaginal sterilisation is easy, if the uterus is considerably prolapsed, the cervix can be comfortably drawn back and vagina is usually capacious. Wedge resection is preferable to distal salpingectomy (fimbriectomy). An alternate method of division of the tube by diathermy is also recommended, in this method ligation is not needed as there is no bleeding. The technique and result are discussed.

Recorded Cases of Uterine Torsion of Various Degrees in Bovines, (Buffaloes and Cows) .

A. Ghani, P.E. Kulkarni and S.S. Marudwar .

*Division of Expt. Med. & Surgery, Indian Vety. Research Instituten,
Izatnagar (U.P.)*

Efforts are made to correct uterine torsion by different methods of rolling the animal on the ground or in river water.

The animals in which uterine torsion (180° to 360°) was with adhesions between the uterus, peritonium and abdominal wall, and could not be relieved by rollings, were preferred for caeserean section.

Post-operative treatment was given carefully to return these animals to normal milking.

Histopathology of Transmissible Venereal Tumour in Dogs

Arup Kumar Das, Debkumar Das, Utpal Das, Indrani Laha and J. Sengupta .

Friends of Dogs, Calcutta-700 019 .

Histopathological study of transmissible venereal tumour in 29 male and female mongrel dogs including two metastatic cases were suggestive of "alveolar soft part sarcoma, "

Histopathologic Studies of the Uterine Horn Cysts in Sub-total Hysterectomized Bitches

Deb Kumar Das, Utpal Das, Arup kumar Das, Indrani Laha, J. Sengupta, P.K. Bose and B.B. Das .

Friends of Dogs, Calcutta-700 019

Sub total hysterectomy (uterine horn ligation) were performed upon a series of bitches. They were found to have developed cystic dilated structures in relation with the ligated horns. The cysts were studied histopathologically and the results are to be discussed.

Incidences of Metastasis of Canine Transmissible Venereal Sarcoma

S.K. Pandey, M.K. Bhargava, V.P. Chandrapuria and S.K. Tiwari

Deptt. of Surgery & Radiology, College of Vety. Science & A.H. Jabalpur .

Two hundred and ninety six dogs of either sex with indications of occurrence of canine transmissible venereal sarcoma were carefully examined for the presence of any simultaneous cutaneous growth in any part of the body. Seven animals showed cutaneous metastasis. Histological examination revealed the presence of similar tissues indicating towards metastasis. No specific relationship with age and breed could be established. However, in the present study metastasis was seen only in male dogs.

A Case of Bladder Rupture in a she Buffalo

K.K. Mirakhur, Sukhpal Singh and S.S. Rathore

Deptt. of Surgery & Radiology, Punjab Agril. University, Ludhiana-141 004.

A buffalo was presented in the clinic with the history of sudden onset of anuria since 9 days. Animal was showing fever, dehydration, elevated heart rate and laboured breathing. Per-rectal examination and abdominocentesis confirmed cystorrhexis. Animal was subjected to left flank laparotomy under local infiltration analgesia. Abdominal urine was siphoned out and an inch long antero-dorsal tear on bladder was repaired. Post operatively animal was treated with antibiotics, corticosteroids, fluid and analgesics. Despite a clear urethral passage and cystorrhaphy, animal failed to urinate because of persistent bladder atony which did not respond to intravenous calcium and parasympathomimetics administration. Blood examination revealed moderate hyperkalemia, severe hypochloremia, but normal sodium and calcium levels. Electrolyte examination of peritoneal urine revealed very high levels of sodium, besides very low levels of potassium and calcium ions,

Haematological and Biochemical Studies on Pre and Post Caesarean Section in Bovine

O.P. Saxena, A.C. Varshney, N.S. Jadon, Amresh Kumar and Y.P.S. Dabas .

College of Vety. Science, G.B. Pant University of Agril. & Tech. Pantnagar-263145

Haematological and biochemical studies were carried out in fifty three (18 cow and 35 buffaloes) cases of dystocia, where caesarean section were performed. Haematological studies revealed a rise in erythrocytes, PCV, haemoglobin, basophils and neutrophils before surgery and remained higher upto 1st to 3rd post-operative day. Eosinophils remained low till the operation was over. These haematological values returned to normal physiological range by eighth post-operative day. Before and after surgery sodium and chloride showed a reduction upto 4th post-operative day, however potassium showed slightly reversed pattern. There was fall in serum total protein and rise in SGOT, SGPT, LDH, BUN and glucose after laparohysterotomy which continued upto 5th-7th post-operative day and thereafter returned to almost normal physiological limits.

Easy Catheterization Technique of Bovine Urethra through Ruptured Urinary Bladder

S.S. Marudwar, S.B. Thakur, M.S. Dhakate M.D. Narkhede and P.E. Kulkarna .

Deptt. of Surgery, Nagpur Vety. College, Nagpur.

The passing of a catheter through a rent in the bladder poses lot of difficulties because of spasms and coiling of catheter in the bladder itself. The effect of spasms have been found easily eliminated by canulation of the neck of the bladder using 7mm.PVC endotracheal tube. The passing of polythene catheter of appropriate size through this canula made the job very easy .

A Typical Case of a Malignant . Granulosa-Cell Tumour of the Ovary in an Infertile Dachshund Bitch

Dipak Kumar De, Satadal Das, A. Sarkar and P.K. Bose.

Friend of Dogs, Calcutta-7000 019

An encapsulated tumour composed of firm yellow solid tissue in the ovary and a long big mass in the Uterine wall were removed by ovariohysterectomy from a 12 years old smooth hair standard Dachshund bitch. The case was diagnosed by x-ray examination and exploratory laparotomy. The histopathological examination revealed malignant granulosa-Cell tumour of the ovary with metastatic deposits in the uterine wall. The sequence of the events and outcome was discussed .

A two Stage Surgical Approach for Correction of Rectovaginal Fistula & Atresia-Ani in a Maiden Spitz Bitch

B.B. Das, D, Subhananda Bhattacharya, P.K, Bose, S.K, Guha and A. Sarkar.

*Deptt. of Vety. Surgery & Radiology, Faculty of Vety & Animal Sciences, Bidhan Chandra
Krishi Viswavidyalaya., P.O. Mohanpur Dist, Nadia, West Bengal.*

In the very puphood, the animal showed difficulty in defecation and passing of scanty stool through the rectovaginal fistula. The animal was presented for surgical correction at six (6) month of age when difficulty of defecation was much pronounced. Surgery was under taken in two stages of approaches, firstly to atresia-ani correction and secondly correction of the recto-vaginal fistula. The operation was done under atropine-morphine sedation followed by local infiltration. Standard technique of correction of atresi-ani foliowed by recto vaginal fistula correction were described.

Chemotherapy of Transmissible Venereal Tumour in Dogs

Utpal Das, Arup Kumar Das, Indrani Laha, Debkumar Das and B.B. Das,

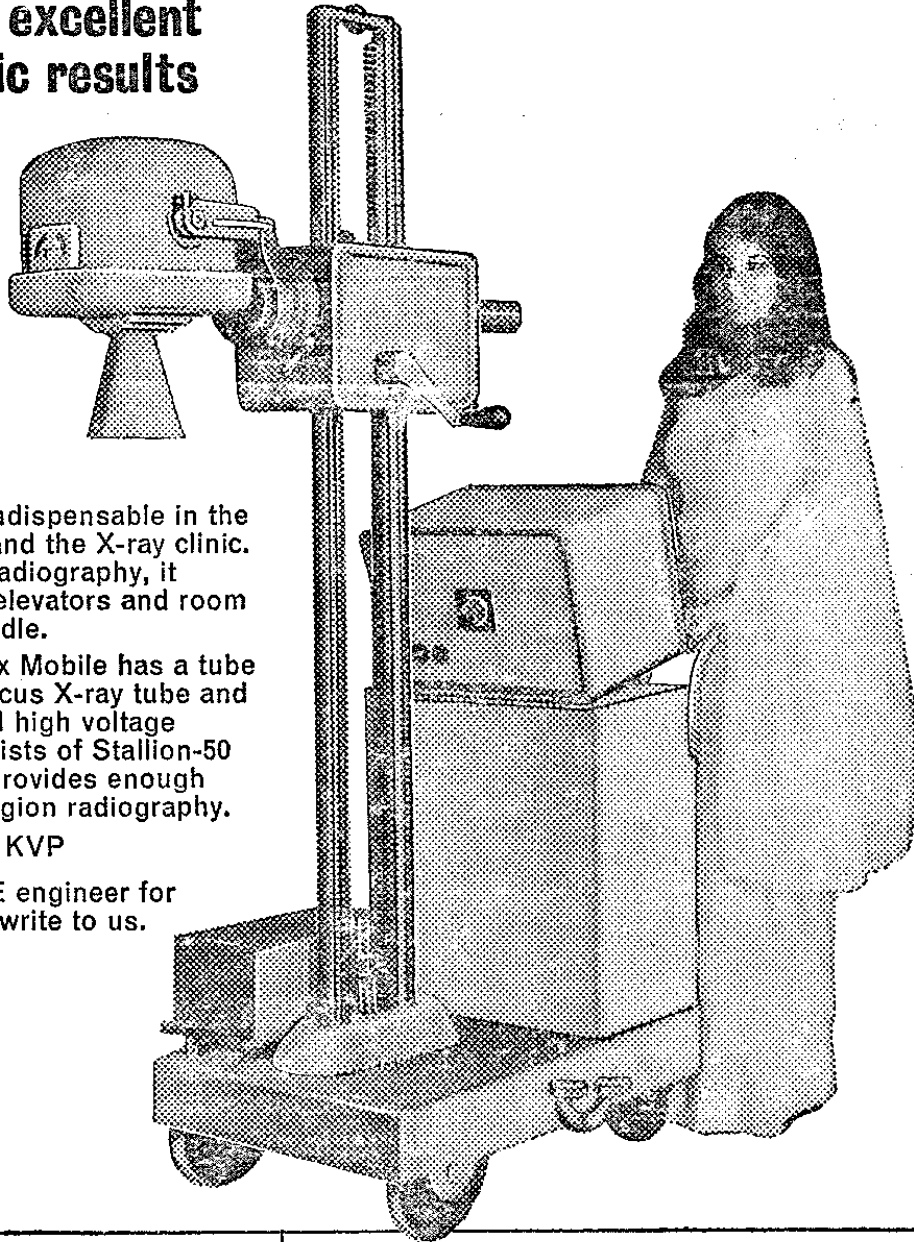
Friends of Dogs, Calcutta-700 019.

Twenty-eight dogs with transmissible venereal tumours were examined. After biopsy the dogs were treated in four groups with different chemotherapy regimen consisting of cyclophosphamide and / or methotrexate and / or vincristine sulphate. Result of chemotherapy were evaluated; 15 had complete regression of tumour, 1 had partial regression of tumour.

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