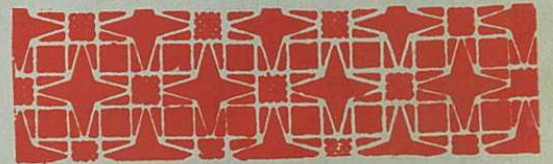
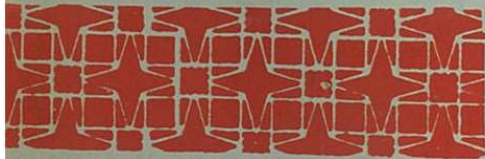


Souvenir

INDIAN SOCIETY
FOR
VETERINARY SURGERY

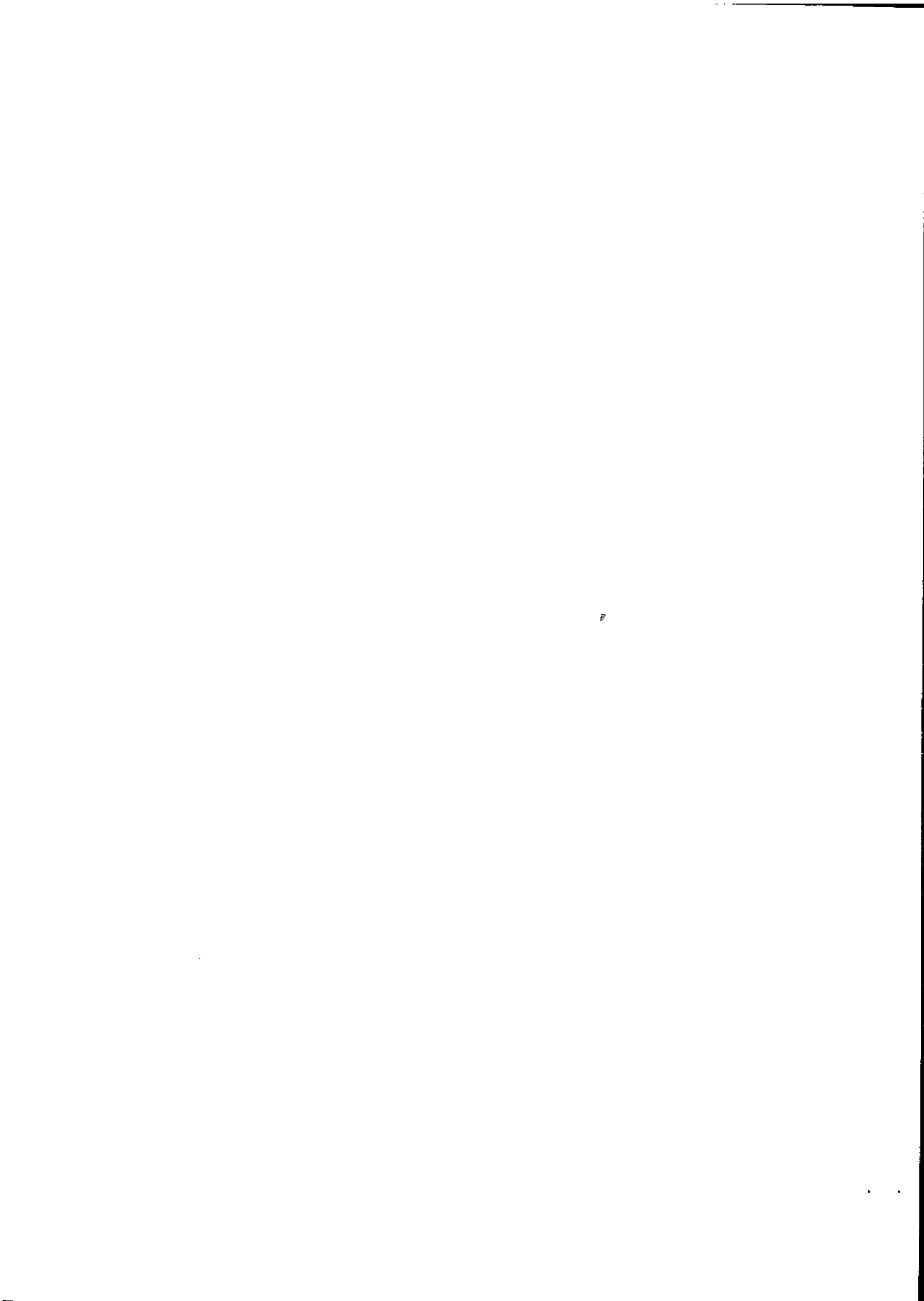


8th Symposium

16th - 18th DECEMBER 1984

DEPARTMENT OF SURGERY

Punjabrao Krishi Vidyapeeth, Akola. 444104.



**Great Confidence Sown...
is great confidence grown**

**खरीप असो वा खरीः
घातंतय एकच नाणं
महाबीज हेच बियाणं**

पेरणीचे दिवस आले म्हणजे महाबीज खरीदण्याचे दिवस आले
मग पेरणी खरीपाची असो वा खरीची
कुठल्याही पेरणीला सर्वांच्या विश्वासाचं बियाणं
म्हणजेच महाबीज, संकरीत ज्वारी,
संकरीत बाजरी,
संकरीत तसेच सुधारीत कपाशी,
अधिक उत्पन्न देणारा गहू,
भुईमूग, हरभरा तसेच....
हर तऱ्हेची गळिताची
धान्यं, कडधान्यं— यांत
उजवं बियाणं
म्हणजे महाबीज.

महाबीजाच्या निर्मितीत राज्य
सरकार, कृषि विद्यापीठं, शेती
महामंडळ आणि हजारो शेतकऱ्यांनी
निर्माण केलंय. आधुनिक शेतकी
विज्ञानाच्या साहाय्याने तुमची सर्वांची शेती जास्त
उत्पादनक्षम आणि फायदेशीर व्हावी ह्यासाठीच
महाबीजाचं उत्पादन करण्यात आलंय.
महाबीज घेरावं आणि महापीक उगवावं।

तुमच्या विश्वासाचं बियाणं-महाबीज.

महाराष्ट्र राज्य बियाणे महामंडळ मर्यादित, अकोला

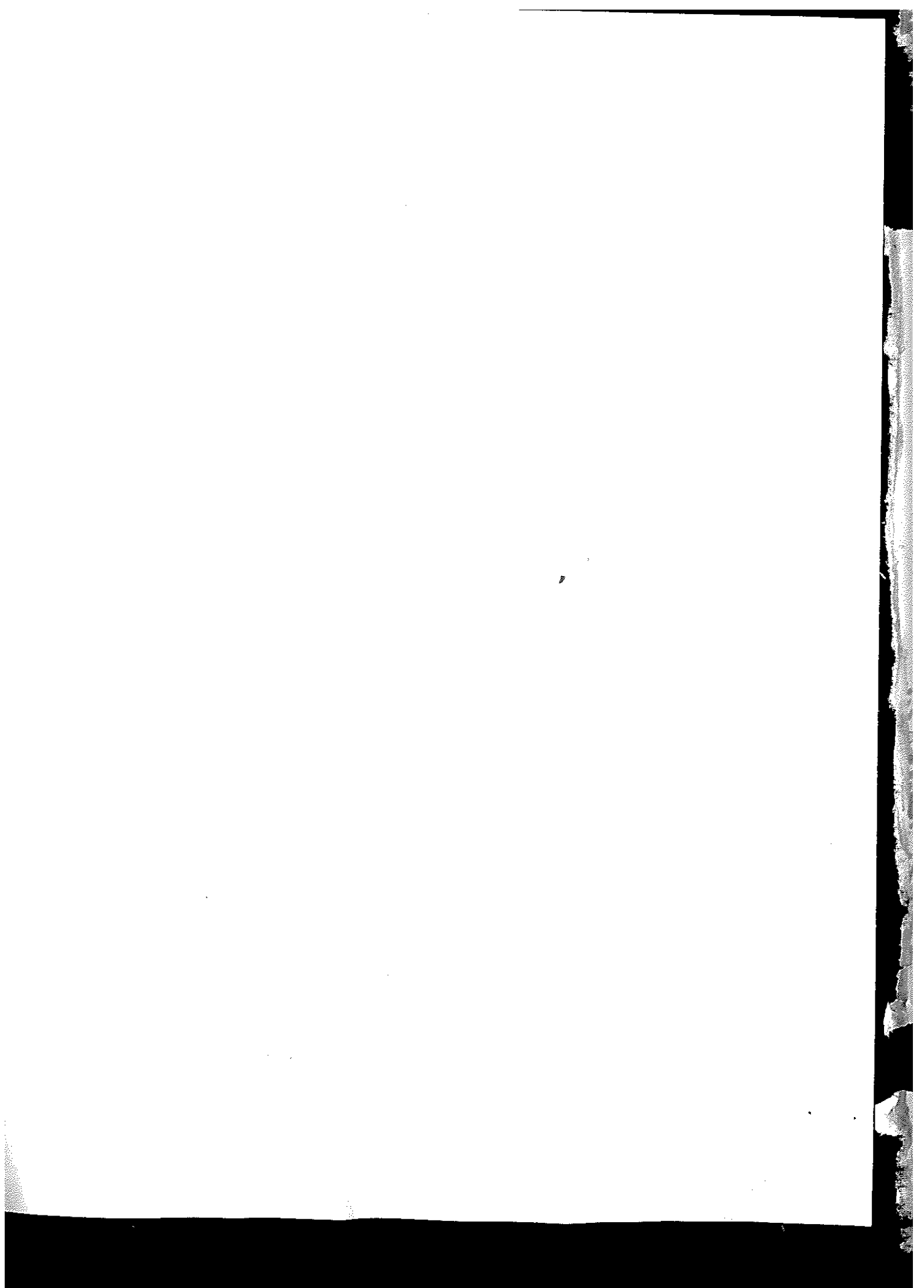
प्लॉट नं. ८ शास्त्री नगर पो. बॉक्स १९ अकोला ४३४ ००१



**Mahabeej the seed of
scientific agricultural development.**

MAHARASHTRA STATE SEEDS CORPORATION Ltd.

Head office Plot No. 8 Shashtri Nagar, P. B. No. 19 Akola 444001

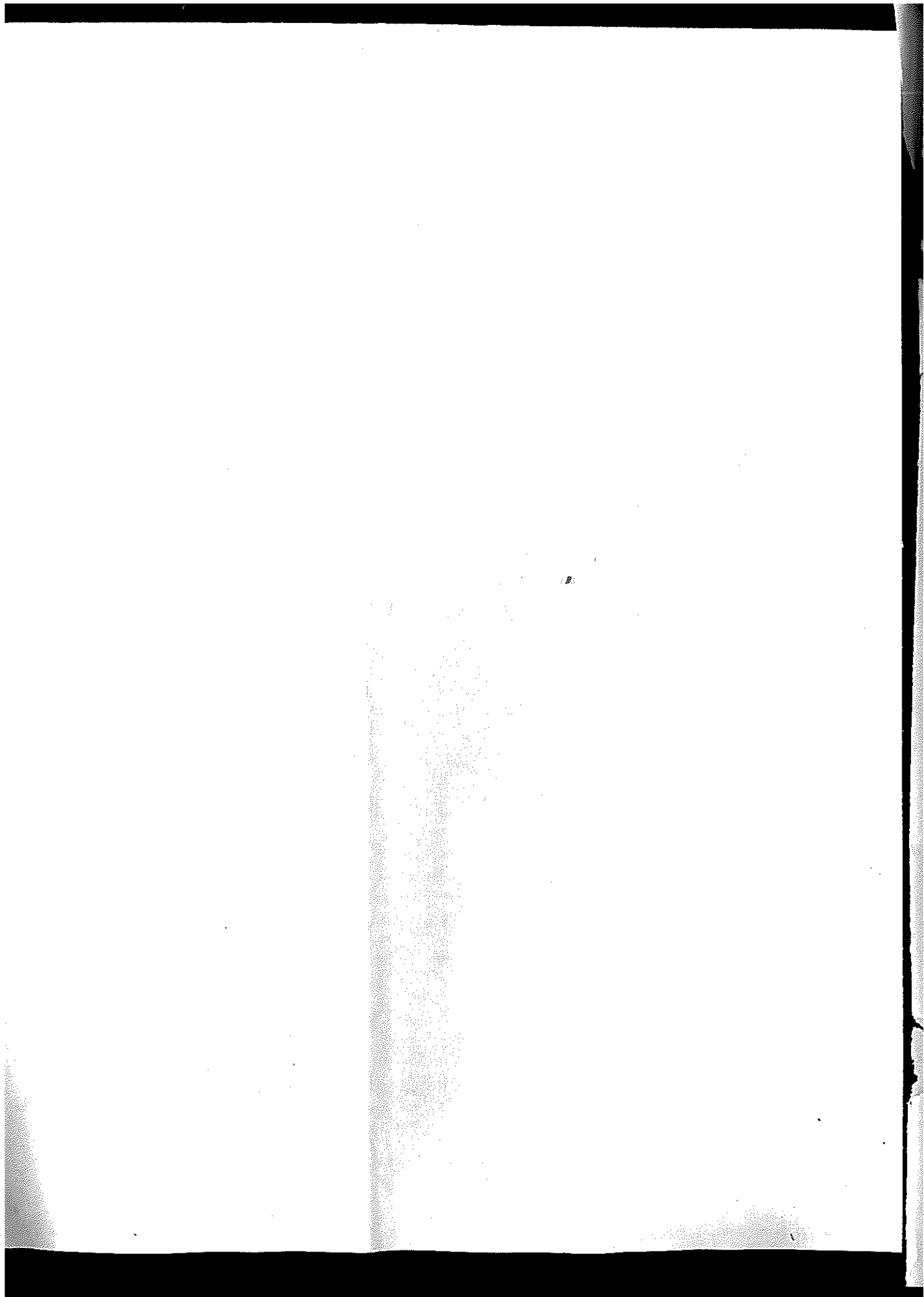


*Dedicated to
The inspiring memories*



Late Mrs. Indiraji

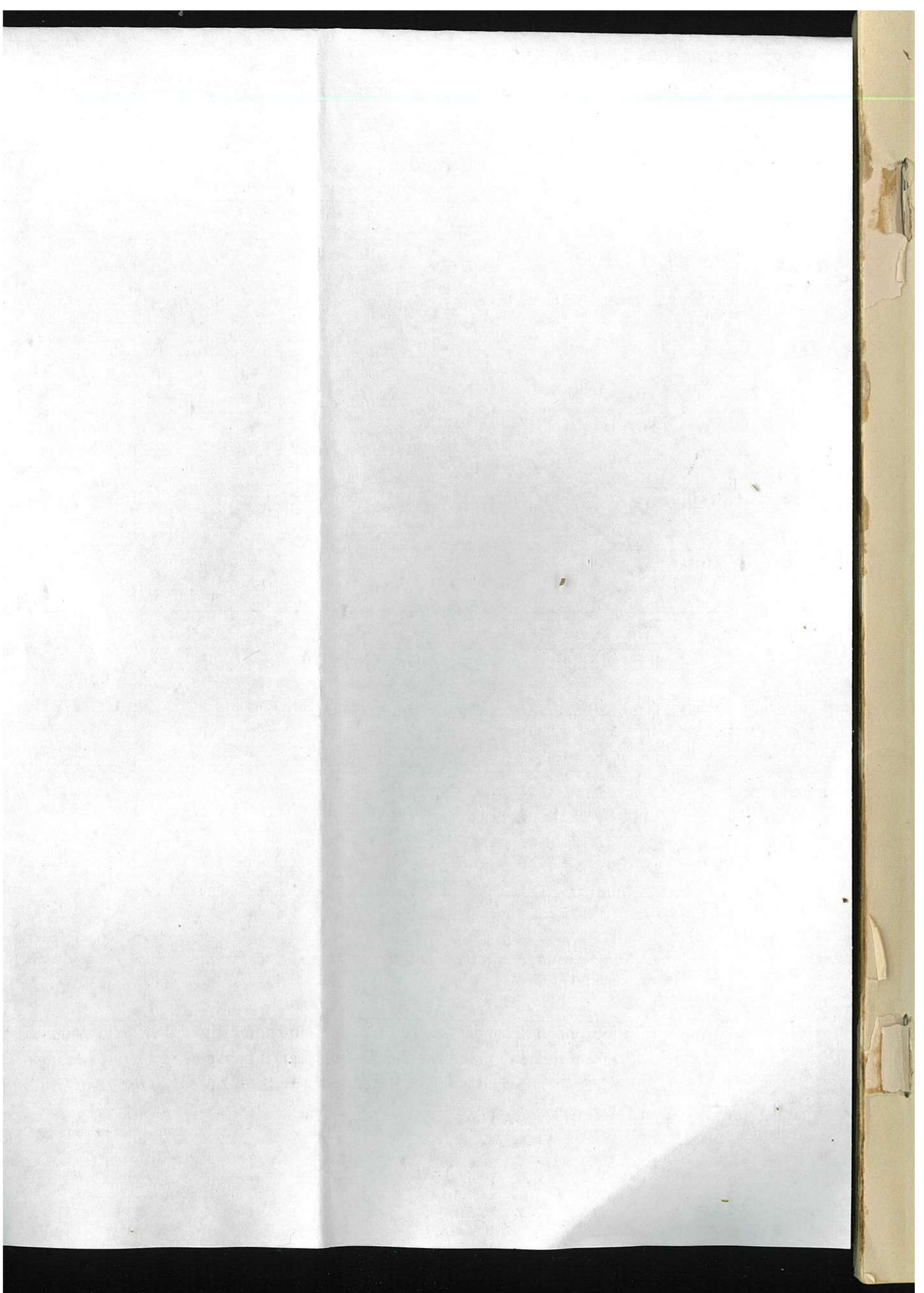
Prime Minister of
India



Dr. Panjabrao Deshmukh



*Let his Dedication to the Progress of Farmers
Inspire us for research and Develop the
Veterinary Surgery*



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Krishi Bhavan Dr Rajendra Prasad Road, New Delhi - 110001

Director General, ICAR & Secretary
to the Government of India

Telegram : 'AGRISEC'

Telephone : 3 8 2 6 2 9

Telex : : ICARND - 3701

November 23, 1984

I am happy to learn that the Indian Society for Veterinary Surgery is organising a National Level Symposium on "Surgical Affections of Urogenital System in bovines in relation to production" from December 16 to 18, 1984 at the Punjabrao Krishi Vidyapeeth, Akola.

Increased productivity through diversification of agriculture with livestock farming seems indispensable to small and marginal farmers to supplement their income. Therefore, we must ensure scientific and efficient management of both crop and livestock components under mixed farming systems. The existence of a large number of surgical affections involving Urogenital System presents a serious constraint on full exploitation of the genetic potential of the bovines and limiting their productivity. Our scientists should make every effort to put to adequate use the latest innovations in experimental surgery and advances in cryosurgery and anaesthesiology for solving problems of urological gynaecological and obstetric importance. I hope that the deliberations at the Symposium will help to identify priority areas of concern to experts in Veterinary surgery and to modernize the surgical operations.

I wish the Symposium all success

O. P. Gautam

1944

1945

1946

1947

1948

1949

1950

1951

1952

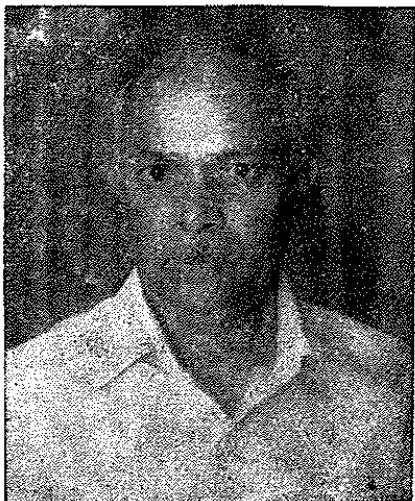
1953

1954



The Maharashtra Council of Agricultural Education & Research

Phone - 51668 (O) 58401 (R)



COLLEGE OF AGRICULTURE CAMPUS
PUNE - 411 005
MAHARASHTRA INDIA

Shri Annasaheb Shinde
VICE-CHAIRMAN

I am happy to know that the Indian Society for Veterinary Surgery is focussing its attention to one of the vitally important problems of bovines i. e. Surgical treatment for Urogenital systems. Following the quantum jumps in food production in our country milk production is also on the increase. Large share in this revolution is due to milk from cows. Basically most of the Indian cows from a neglected lot often starved or malnourished. Besides being afflicted by diseases bovines often develop malformation in their urinary and reproductive systems. Secondly, large scale cross - breeding programme in cows prone to development of several surgical affections. Dystocia, prolapse of uterus, persistent corpus luteum, cystic ovary torsion of uterus etc. are most common surgical affections in our bovines. Several genetically good animals are lost because of these problems. In our vast country where farming is main occupation spread in remote village, treatment to animals becomes difficult.

It is because of this background. I appreciate the awareness shown by the Indian veterinary surgeons. I am confident that these eminent surgeons will apply their minds, evolve techniques so that not many of Indian bovines fall prey to the afore - mentioned surgical affections and also generate methods to contain such affections promptly and more successfully. Recent technique of Zygote transplant will go a long way in producing high milking animals in a shortest possible time.

On the eve of 8 th Symposium on " Surgical Affections of Urogenital system in relations to production, let me give you my best wishes for it's success.

Annasaheb Shinde

International Journal of

Business Research

Volume 10 Number 10

October 2018

ISSN 2162-1454

DOI: 10.5296/ijbr.v10i10.1454



Copyright © 2018 by International Journal of Business Research
All rights reserved. This journal is registered at the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923.
01923-1875. www.copyright.com
Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by International Journal of Business Research for users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the fee of \$12.00 per copy is paid directly to CCC.
For those organizations that have been granted a photocopy licence by CCC, a separate system of payment has been arranged. The fee code for users of the Transactional Reporting Service is 01923-1875/2018 \$12.00.
This journal is also registered at the Copyright Licensing Agency, 90 Tottenham Court Road, London W1P 0LP, UK. 01923-1875/2018 \$12.00.
This journal is also registered at the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, USA. 01923-1875/2018 \$12.00.
This journal is also registered at the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, USA. 01923-1875/2018 \$12.00.

International Journal of Business Research
Volume 10 Number 10
October 2018
ISSN 2162-1454
DOI: 10.5296/ijbr.v10i10.1454

P. D. Mokasdar

DIRECTOR

Department of Animal Husbandry
Maharashtra State **Pune**



P. D. Mokasdar
Director

I am extremely happy to note that the VIII symposium on focal theme of "Surgical affections of Urogenital systemx in bovines in relation to production is to take place from 16 th to 18 th December 1984, at the Punjaprao Krishi Vidyapeeth, Akola.

Veterinary Surgery is more complicated and problematic because an operation on an animal under our conditions confronts the Surgeon with usual odds and inadequacies. There is therefore vast scope to improve Veterinary Surgical Service, especially in the departments of Radiology, Anaesthesia and Surgical equipments. Science and Technology have gained momentum in the recent years-

The affections of urogenital system are adversely affecting the productivity of draught & Milch animals. It is of utmost to find out innovative, simple surgical techniques, which would be easily adaptable under field conditions.

I wish grand success to the endeavour and hope the pains and efforts taken in the conference would result in reducing the animal suffering and check economical losses in the livestock, in the near future.

PUNE

(P. D. Mokasdar)

Telex : 0725-215 PKVIN

Gram - University

Phone office : 5363, Resi. 5184

PUNJABRAO KRISHI VIDYAPEETH

Krishinagar, **AKOLA** 444 104



Dr. K. R. Thakare
VICE-CHANCELLOR

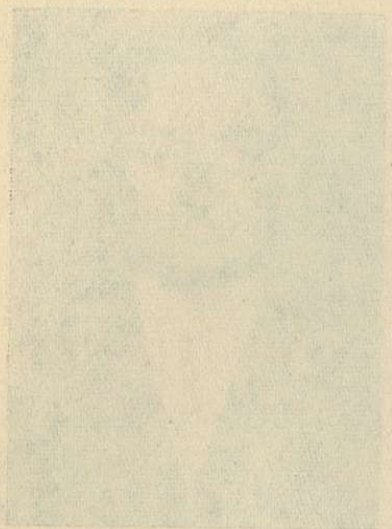
It is a matter of great pleasure that the Indian Society for Veterinary surgery is organising its 8 th Symposium in the Punjabrao Krishi Vidyapeeth: 'Operation flood' as is known for its aim at rapidly increasing milk production will enter in to phase II during the VII th Five Year Plan. It eventually envisages larger number of high yielding animals. Since production largely depends on sound health, effective animal health cover will become increasingly important for successful implementation of the programme. The main theme of the Symposium closely relates to the production and hence deserves an appreciation for the organisers.

I am sure that the discussions and exchange of views amongst the fellow scientists from different parts of India will be informative and thought - provoking to the scientists.

I wish the Symposium a grand success.

(K. R. Thakare)
Vice-Chancellor
P. K. V. AKOLA

THE JOURNAL OF THE
ROYAL ANTHROPOLOGICAL INSTITUTE
PART 1, 1935, P. 1-10
LONDON: H. K. LEYBOLD, LTD.



It is a matter of great pleasure to the Editor of the Journal to announce the publication of the first issue of the new series of the Journal, which will be published in the autumn of 1935. The new series is intended to be a more comprehensive and more up-to-date journal than the old series, and it is hoped that it will be of great interest and value to all those who are concerned with the study of man and his culture.

I am sure that the illustrations and reports of this journal will be of great interest and value to all those who are concerned with the study of man and his culture.

(K. R. TRACY)
P. K. V. AKOLA

MAHATMA PHULE AGRICULTURAL UNIVERSITY



RAHURI - 413723, Dist - Ahmednagar,
Maharashtra State India Phone - 65

Camp office - College of Agriculture
Pune - 411 005 phone - 56627

Prof. Dattajeerao K. Salunkhe
Ph. D.
Vice-Chancellor

I am happy to know that Indian Society for Surgery is organising a national Symposium on "Surgical Affections of Urogenital Systems in Bovines in Relation to Production" at Panjabrao Agricultural University, Akola. It gives me immense pleasure that the topic on which the conference is to have its main deliberations is not only of academic interest but is field oriented and has a relation with animal production.

As animal improvement programmes are being launched on massive scale for increasing the productivity of animals at farmers door, the responsibility of sustaining the higher production levels of these animals will mainly depends upon the critical health inputs. The subject of surgery has to play a great role in this direction.

The approach envisaged by the symposium is unique and I wish every success to the symposium.

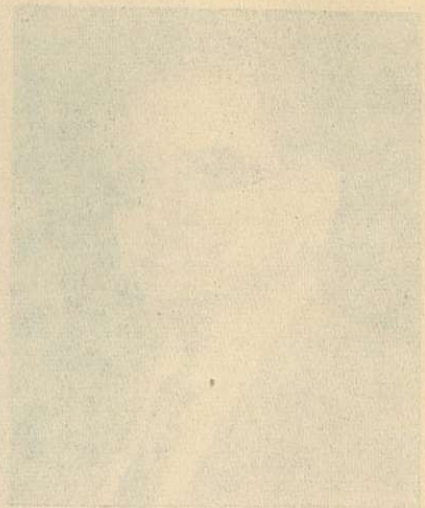
Sincerely yours,

D. K. Salunkhe
Vice - Chancellor

MAHATMA PHULE AGRICULTURAL UNIVERSITY

RAHURI - 413223 Dist. - Ahmednagar,
Maharashtra State India Phone - 82

Camp office - College of Agriculture
Pune - 411 005 Phone - 56837



Prof. Gattage K. Salunkhe
Ph. D.
Vice-Chancellor

I am happy to know that Indian Society for Surgery is organising a national Symposium on "Surgical Affections of Ungulate Systems in Bovines in Relation to Production" at Pimpri Chinchwad Agricultural University, Akola. It gives me immense pleasure that the topic on which the conference is to have its main deliberations is not only of academic interest but is held oriented and has a relation with animal production.

As animal improvement programmes are being launched on massive scale for increasing the productivity of animals at farmers door, the responsibility of sustaining the highest production levels of these animals will mainly depend upon the critical health inputs. The subject of surgery has to play a great role in this direction.

The approach envisaged by the symposium is unique and I wish every success to the symposium.

Sincerely yours,
D. K. Salunkhe
Vice-Chancellor



Dr. P. V. Salvi

M. S., Ph. D. [Cornell : U. S. A.]
VICE-CHANCELLOR

Konkan Krishi Vidyapeeth

Dapoli 415712

Dist. : **Ratnagiri** (Maharashtra)

Gram : KONKANAGRI

Tel. Office : 64 * Resi. : 15

7 th November 1984.

Dear Dr. Kulkarni,

I am happy to know that the Indian society for veterinary surgery is organising its eighth national level symposium on "Surgical Affections of urogenital system in Bovines in relation to production at the Punjab-rao Krishi Vidyapeeth, Akola from 16 th to 18 th December 1984. I am sure that the deliberations in the symposium will be interesting and useful to researchers, veterinarians and dairymen.

I wish all success to the symposium.

with best wishes,

Your Sincerely
P. V. Salvi

Konkan Krishi Vidyapeeth
Dacolli 415712
Dist. Ratnagiri (Maharashtra)
Gann. KONKANAGRI
Tel. Office : 02 2. Resid. : 75
31th Novmber 1984



Dr. P. V. Saavi
M. S. Ph. D. Cornell. U. S. A.
VICE-CHANCELLOR

Dear Dr. Kulkarni,

I am happy to know that the Indian Society for Veterinary Surgery is organising its eight annual level symposium on "Surgical Affections of urogenital system in Bovines in relation to production at the Punjab-Goa Krishi Vidyapeeth, Akola from 16th to 18th December 1984. I am sure that the deliberations in the symposium will be interesting and useful to researchers, veterinarians and laymen.

I wish all success to the symposium.

With best wishes

Your Sincerely
P. V. Saavi

Gram - University
Phone - Office 307 PBX - 1
Res. 48 PBX - 2

Marathwada Agricultural University

PARBHANI 431 402
Maharashtra, India

Dr. N. Ganga Prasada Rao FNA
VICE-CHANCELLOR

I am extremely happy to hear that the Indian society for veterinary surgery is organising a National Symposium, " Surgical Affections of urogenital system in bovines in relation to production at the Punjab-rao Krishi Vidyapeeth, Akola. The symposium should lead towards greater understanding in the theory and practice of Veterinary surgery.

I wish the symposium success.

Dr. N. G. P. RAO

Grant - University
Phone - Office 307 PBX - 1
Res 48 PBX - 2

Matswada Agricultural University
PARBHANI 402
Maharashtra, India

Dr. M. Ganga Prasad Rao FVA
VIVE-CHANDLER

I am extremely happy to hear that the Indian Society for Veterinary
surgery is organising a National Symposium "Surgical Affections of
urogenital system in bovines in relation to production at the Punjab-
Karni Veterinary Akola. The symposium should lead towards
greater understanding in the theory and practice of Veterinary surgery.

I wish the symposium success.

Dr. N. G. P. RAO

SESSION I

SESSION I

Surgical diseases of Genital system in bovines in relation to production

R. P. S. Tyagi, Director of Research

Haryana Agricultural University Hissar

Sound reproduction is a prerequisite for normal productivity. Any abnormality in the reproduction adversely affects production of farm animals by way of reduced milk, reduced calving and increased calving interval. This excludes heavy economic losses due to increased mortality rate with many of the diseases. List of genital diseases is unending but my talk is limited to the surgical diseases i. e. where it becomes either imperative to do surgery or it is a method of better choice to treat the disease.

1. Uterine torsion.

This is one of the most significant diseases, incidence of which is much higher in buffaloes in comparison to cows. Buffaloes occupy a predominant position in livestock population of India. Economic losses due to uterine torsion and resultant infertility are very high. So I have chosen this topic for a detailed discussion. Incidence - Although uterine torsion is a significant disease of both cows and buffaloes, its incidence appears to be much higher in latter. Unfortunately true figures of its incidence in India are not available. Only a couple of reports are available which exclusively show the results from university clinics. Hence these figures cannot be said even to represent the state from where reports were made. So there is an urgent need of a national survey on this aspect. Nevertheless the

figures are self revealing. One of the reports from Gujarat places the incidence at 46% of the cases of abnormal parturition in buffaloes. Reports from Panjab and Haryana show these figures as 66.6% and 43.5% respectively. The incidence in Indian is much higher than reported figure of 32% in Egyptian buffaloes. Incidence in cows in India has not been worked out but very few cases have been reported. From other countries considerable variation has been reported with a range of 2-25%.

According to season, in cows maximum cases are reported during summer months (European countries). In buffaloes (in India) incidence has been reported to be maximum during rainy season followed by winter, summer and spring. These figures are directly related to the frequency of calving during a particular season.

Most of the reports indicate that both in cows and buffaloes the incidence of malady is highest in pluriparous animals. In buffaloes 75-95% of the affected animals have been reported to be pluriparous. Few workers also believe that incidence is higher in the age group of 4-8 years although some do not believe that any correlation exists between age and incidence. Most investigators agree that development of uterine torsion is closely related to the act of parturition. Most affected cases

are near term or in the first stage of labour. In few cases presented for treatment signs of labour were present but weaned off subsequently. Although the reasons for association of uterine torsion with labour are not clearly understood, it is mostly believed that movements of foetus at this stage act as an exciting cause. However, few cases at other stages of gestation have also been reported. The cause for higher incidence in buffaloes has not been investigated but a group of investigators believe that pendulous abdomen and wallowing habits of this species may predispose them to the same.

Degree of uterine torsion – The degree of uterine torsion varies considerably. The cases have been recorded with 45° - 360° of torsion in buffaloes most workers agree that in buffaloes 180° is the commonest. In cows opinions differ to a great extent, a group feels that 90° is most frequent while others report 360° torsion to be the commonest.

Direction of uterine torsion – Torsion of uterus may occur both in clockwise or anticlockwise direction. In buffaloes most cases have clockwise torsion while in cows it is predominantly anticlockwise. There is known reason for this difference in two species.

Position of torsion – on the basis of position of torsion it can either be a precervical postcervical torsion.

Both types are seen in cows and buffaloes, but in majority of the cases it is post-cervical.

Etiology – A number of studies have been made on the changes in the blood biochemical constituents during torsion and after treatment. The constituents

investigated include electrolytes, trace elements (copper and zinc), cortisol and hydroxyproline. However, none of the studies could establish any relationship between the changes observed and the occurrence of torsion. Also no prognostic relationship have so far been worked out on the basis of these changes. All the results so far reported at best can be interpreted as the variations due to stress of pregnancy, abnormal parturition and obstetrical procedures.

The results mostly vary due to the stage of gestation at which animals were presented or according to the degree of stress to which animals were subjected before admission to a clinic.

An interesting aspect is a very low incidence of uterine torsion form animals of organised forms like those of Agricultural Universities or various central and state Govt. institutions. Almost all the cases are brought by the dairymen or by the farmers from village. One is left to wonder if managerial practices in our country have any bearing on the high incidence of uterine torsion in buffaloes. This is the point which tempts to correlate the high incidence in buffaloes to their wallowing habits. In organised forms, the animals are seldom let loose to go into the ponds specially during gestation period or near term.

Treatment – Two most commonly used methods for treatment of uterine torsion are 1) rolling of the dam and 2) caesarean section. Rolling is most effective when foetus is alive or, if the foetus is dead but there are no adhesions of the uterus with the adjacent structures.

Rolling method if properly applied should be an effective method in field hospitals where the cases are presented at an early time and complications are least. In long standing cases where foetus is dead and animal is toxæmic rolling may further deteriorate the condition of the animal. Also if there are adhesions of the uterus with adjacent structures, rolling may cause rupture. In such cases caesarean section should be preferred. Caesarean is also indicated in those cases where torsion coexists with oversized or emphysematous foetus. A good preoperative preparation and a proper post-operative management is most essential in both rolling and caesarean methods of treatment for good results. Postoperative management schedules adopted in such cases are empirical. It is felt that appropriate controlled and monitored treatment schedules should be formulated for such cases so that general guidelines can be given to field veterinarians for management of such cases after the calf has been delivered,

Unfortunately our attention has always been focused on the immediate treatment of the animals. One of the compelling reasons being the attitude of our clients where every case has to be treated irrespective of economy involved. This relates to the sentiments involved. There are no reports from India where future fertility status of the animals after treatment has been recorded. It would be very important and of interest to know how many animals are fit for bridging after correction of uterine torsion and what percentage is rendered infertile due to various complications involved. This is an area which offers a challenging study.

2. Recurrent Prolapse of vagina

Incidence of recurrent prolapse of of vagina appears to be very high in both cows and buffaloes. Mostly it is antipartum which is of greatest concern. There are no definitive studies from India to indicate true incidence of the condition. One of the studies from H. A. U. Clinic put it around 6% of the total number of animals with reproductive disorders. Incidence has been indicated to be highest during the months of July to October and during last gestation period to near term. A national survey on this aspect is warranted. The exact etiology of the condition remains obscure. An investigation from a western country has related it to the hereditary predisposition with highest incidence in Hereford cattle

Although studies on the plasma macro and microelements concentration in these animals have revealed persistently low calcium values at all stages of gestation and low plasma zinc and copper values at the terminal stages of pregnancy - these changes have not been related directly to the occurrence of antepartum vaginal prolapse. However significantly higher plasma estradiol levels have been reported to occur in such cases at about 7 - 8 months of gestation which could be responsible as the initial triggering mechanism for the prolapse. Yet the reasons as to why such a change occurs is not clear so far.

Because of the nature of the animals that are affected - higher incidence from particular areas and families - hereditary factors are considered to be involved. Limited cytogenetic studies

have not shown any changes in the chromosome number or morphology except a slightly higher incidence of polyploidy and aneuploidy in the affected animals. The significance of these, if any, is not known.

A number of treatments have been and are being used for correction of antepartum prolapse of vagina. Mostly they vary according to the choice and preference of the attending Veterinarian, Progesterone therapy is not always successful. Surgically the application of Buhner's sutures and their removal before parturition is most suitable. So there is an urgent need to work on the etiology of the disease so as to evolve proper treatment schedules.

3. Other Diseases

Most of the other diseases affecting the genital system of bovines are treated routinely and cannot be said to be of national importance. Cryptorchidism and pneumovagina are rarely seen in bovines and so is the occurrence of rectovaginal fistula. Solitary cases are routinely treated. The surgical technique being the preference of the surgeon. Few cases of prepubic tendon rupture are seen in cattle

and buffaloes. Here also the surgical treatment is required which is provided according to the extent of damage and the skill of the surgeon.

Conclusion

In my opinion the most significant surgical diseases of genital system in bovines in relation to production are uterine torsion and recurrent vaginal prolapse. Integrated national level studies are required to work their true incidence and etiology. It looks that indepth studies should be made to work out the relationship of high incidence of uterine torsion in villages. For recurrent prolapse of vagina, nutritional aspects should be studied and it would also be interesting to know if hereditary predisposition exists. From nutritional point of view, investigations in to the nature of soil and crops of the areas and the feeding schedule of the animals should be conducted. Also steps should be taken to work out the incidence of infertility in these animals i. e. for both uterine torsion and recurrent vaginal prolapse so as to work out the economic losses and also to help future studies on these aspects.

□

Superovulation and embryo collection in buffalo calves.

K. Venkateswara Rao, O. Ramakrishna, and D. S. Vijaya Kumar.

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

The experiments were conducted on 12 female buffalo calves of 6 months age. The animals were divided into 4 groups, with 3 animals in each group.

Group : 1 Pregnant mare serum gonadotrophin was injected intramuscularly at a dose rate of 2900 I. U. per animal.

Group : 2 Same as group I, plus 5000 I. U. of leutinising hormone given intravenously.

Group 3 Follicular stimulating hormone was given intramuscularly at the rate of 30 mg per animal.

Group : 4 Same as group III, plus 5000 I. U. of leutinising hormone intravenously,

The animals were inseminated twice at 12 hours interval, via flank incision. The genital organs were collected and flushed. The flushings were examined under stereomicroscope for embryos.

□

Caesarean section in she-camel. (*Camelus dromedarius*) : Complications.

N. R. Purohit; D. S. Chouhan; R. J. Choudhary; R. K. Purohit; C. K. Sharma and B. R. Choudhery

Department of Surgery and Radiology College of Veterinary and Animal Science

Bikaner (Rajasthan) 334001

Five caesarean sections were performed. In one dam, alive foetus was delivered. Some complications of concern encountered, during and after operation were.

1. Splenic injury with subsequent hemorrhage.
2. Escape of foetal fluid into the abdominal cavity,

3. Oedema,
4. Metritis,
5. Peritonitis
6. Suture line infection,
7. Delayed tissue healing and
8. Abdominal hernia

□

"An incidence of bovine macerated fetus in a crossbred cow" (A case report)

P. C. Zambre, K. M. Kale, N. D. Belhe.

A. I. C. R. P. on Cattle, M. P. A. U. Rahuri (M.S.)

A three years & three months old F J G dairy cow was presented with clinical symptoms of dullness, off feed and a history of foul reddish grey vaginal discharge. Per - rectal examination revealed doughy crepitating foetus on the left cornua and on deep palpation the foetal bones could be felt. The case

was successfully diagnosed and treated with caesarian section under tranquillizer and local analgesia Postoperative treatment consisted of intra-uterine and parenteral administration of antibiotics for 5 days. Sutures were removed on 10 th post operative day.

□

Dorsovaginopexy technique for the surgical management of recurrent uterovaginal prolapse in cows.

Dr S. S Misra and Dr S. J Angeio

College of Veterinary Science and Animal Husbandry, C. S. A. University of Agri. & Tech. Mathura Campus.

Recurrent uterovaginal prolapse in cows is a very commonly encountered condition warranting gynaecological surgery expertise. In earlier communication extraneous bilateral vaginopexy has been reported to suit both the cows and buffaloes

In a recently evaluated method using

Misra's vaginopexy needle, dorsovaginopexy technique applying a single stay suture dorsally has been found to be committal. It is easy and quick to be applied and the results are predictable. Furthe ramore, the breeding performance has been observed with this technique did not register any deterioration.

□

Perineal hernia in a she Buffalo.

V. P. Chandrapuria N. A. Nair, and M K. Bhargava.

College of Veierinary Science and Animal Husbandry, J. N. K V. V. Jabalpur-489001 (M.P.)

Perineal hernia is not uncommon in canine but its incidence in bovines is very rare. First report of the condition in buffalces was published by Persania et al. (1983) where contenfs were found to be adipose tissue. George et al. (1983) had reported another case in a she buffalo with involvement of urinary bladder but it is probably the first time to report uterus, urinary bladder and adipose tissue as the contents of perineal hernia in a she buffalo.

A six year old she buffalo was presented to College hospital (case No. 189 Dated 29-12-1981] with a football size swelling on tne left side of the perineum. History revealed that this swelling was developed gradually and attained football size in two months time after the calving. Foetus was extracted forcefully. On general examination swelling was hard painless and irreducible. Animal was straining for defecation apd urination and simultaneously showing mucopurulent discharge form the vagina indicating metritis. On rectal examination it was diagnosed as perneal hernia with the involvement of the uterus and urinary bladder.

Animal was operated under trifl-upromazine sedation and cranial epidural aneesthesia with 2% lidocaine hydrochloride. After incision a big sac formed by perineal muscles and fascia was found which showing a rupture on its left ventral aspect. Incision was extended through rupture to expose the hernial contents. Adhesions were separated and uterus and bladder were recognised Bladder was evacuated and organs were replaced to their normal position. Deep continuous sutures were applied by chromic catgut no. 2 as first line including coccygeus muscles and fascia together which was reinforced by second layer catgut overlaping sutures. Skin wound was closed with nylon mattress sutures.

Postoperative care was emphasised on antibiotic and fluid therapy with dressing. As the symptoms noticed animal was also treated for pyometra. Animal recovered uneventfully in 15 days postoperatively and since then no complication has been reported so far.

□ □

Unusual Solitary Mammary Hyperplasia Following Pseudocyesis in A Bitch

P. N. Sahay; A. A. Khan; I. L. Dass and J. Sharma

Department of Surgery, Ranchi Veterinary College, Birsa Agricultural University, Ranchi-834007

An adult dachshund bitch in her third estrus had a couple of arranged matings during the period. In the previous two cycles the bitch had raised 7 puppies neatly. Bitch was presented when parturition did not take place beyond one week of time. Detailed examination revealed pseudocyesis with mild manifestations. Supportive therapy was given and bitch appeared to be settling down. On 19th day of first examination the bitch was presented again with hyperplasia of one inguinal

mammary gland which had grown to the size of a tennis ball. It was very big for a small sized bitch. Mastectomy was performed next day under first plane surgical anaesthesia. Postmastectomy examination of the mammary chain after 2 months did not reveal the involvement of any other gland. Since mammary tumours are most commonly multiple and bilateral, it was unusual to find only one tumour in an entire chain after pseudocyesis. □

Intra-Uterine Breakage of Pipette : An Unusual Complication of Artificial Insemination

Maj. G. C. Mishra, S. K. Pandey, and V. P. Chandrapuria

College of Veterinary Science and Animal Husbandry, Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur.

Artificial insemination is universally accepted as a popular scientific technique of farm animals. All over the world efforts are being made to innovate the technique of artificial insemination.

Two cows with broken A. I. pipettes in the uterus were referred to

the Department of surgery and Radiology, Veterinary College, Jabalpur. Both the cows were multipara and one of the two was Jersey (No. 1) breed while the other Jersey Holstein cross (No. 2). In one cow the pipette was broken at the time of insemination while in other during the treatment for endometritis. The examination of

genital organs revealed that cow No 1 was suffering from cervicitis whereas cow No. 2 was normal. Immediately after breakage the pipette slipped into the body and thereafter right horn of the uterus and remained there for the period varying between 6 to 8 hours. Efforts were made by uterine manipulation to take off the broken glass pipettes through the OS (external cervical orifice) but were of no avail on account of intense uterine contractions.

The wave of severe uterine contraction started immediately after conodontal luminal slip of the broken pipette within the uterus and propulsion continued till the pipette pierced through

the uterine wall to be ultimately lodged in the peritoneal cavity.

The pipettes were surgically removed by performing laparotomy. These measured 12.5 cm. and 17.5 cm respectively.

Examination of uterus after laparotomy revealed a ruptured vent in the dorsum towards the oviductal end of the right horn in both cows. In cow No 1 the Pipette was lodged in right sublumber region, while in cow No 2 it reached rostroventral part of abdomen and adhered to the diaphragm on left side. No signs of pyometra were noticed and both the animals conceived by artificial insemination.

□

Hydrocele in a Camel : A Case Report

T. K. Gahlot, D S. Chouhan and Naveen Kumar

College of Veterinary and Animal Science Bikaner [Rajasthan]

It is not a customary in India to castrate a camel except for a few surgical affections of scrotum and testis and spermatic cord, e. g. hydrocele, orchitis, abscessisation, schirrhous cord etc, The present report pertains to a very rarely recorded case of hydrocele in a camel.

Clinically, one testicle of the animal was more pendulous than the other. Little fluid was revealed on clinical examination. Though this condition was not troubling the animal but owner requested for castration from cosmetic point of view.

Castration was performed conventionally under epidural anaesthesia and triflupromazine hydrochloride tranquilization. The enlarged scrotum revealed fluid and adhesions of testes with scrotal wall, which was suggestive of some old traumatic injury.

The adhesions were broken manually and bleeding was checked by tamponing the scrotal sac with swabs. Open wound healing was allowed with alternate days dressing of the wound. Animal recovered uneventfully in six weeks.

□

Surgical Amputation of Testis in a Marino Ram : A Case Report

Syed. Sajjad Hussain

Assistant Research Officer, Faculty of Vety.
Science & Animal Husbandry Baghi Ali Mardan
Khan, Nowshara Srinagar - 190011 Kasmmir

An Australian Marino ram ageing about six years and weighing 70 kgs was suffering from orchitis since eight months and did not respond to conventional antibiotic therapy. The size of the organ along with scrotum had increased extensively and the pendulous mass of about 10 kg was almost touching the ground. Surgical intervention was done under Lignocaine HCl 2% infiltration in the skin and at the base of the organ. The animal was placed in dorsolateral recumbency. The skin incision was taken at the perinium. The tunics were cut, the ductus deferens with the blood vessels were tied with a strong ligature. After transecting both cords along with scrotal ligament, the pendulous mass (testis and scrotum) was left intact. Since there were

Abdul Salam Mir

Deputy Director Research, Disease Investigation
Lab, Baghi Ali Mardan Khan, Nowshara
Srinagar-190011 Kashmir

extensive adhesions between the tunics and testicles, the amputation of the mass was done adjacent to the rudimentary teats.

The wound was irrigated with a mixture of 5 ml wolicylin D-5 and 2 ml Lignocaine HCl 2%. The skin wound was closed by interrupted sutures using silk thread. The Wolicyclin-D 5 was administered parenterally @ 5 ml for 6 days. The wound healed by first intention without any complication and sutures were removed 10 days after the operation.

The ram after amputation showed a rapid improvement in general body condition. The body weight of the ram one month after surgery was 65.5 kgs. □

Rectovesical fistulá in a post parturient buffalo.

Dr S. S. Misra and Dr. S. J. Angelo

College of Veterinary Science and Animal Husbandry. C. S. A. University of Agri. & Tech. Matnura Campus.

A third calver murray buffalo exhibited unusual manifestation of voiding diarrhoeic consistency faeces via her vulva. The discharge of the materials coincided with the efforts to urinate although it was partially masked by extreme degree of tenesmus. The buffalo had calved 10 days back before developing this complication and it had a complete uterovaginal prolapse. Obviously, it was handled by local quacks who have succeeded in the mechanical repos-

ition of the viscus on the day of the episode.

Clinical examination under epidural analgesia revealed repositioned uterus to be a mass of undescended uterine anatomy. A perforation in the rectal wall leading to the urinary bladder was discovered. Treatment was not undertaken as the uterine urinary bladder status was beyond the scope of surgical repair.



Equine Surgical Affections of Reproductive Organs

S. S. Rathor

Director of Veterinary Clinics Punjab Agricultural University Ludhiana

I. Castration in Standing Position

Castration in standing position is ideal for elderly stallions and nervous horses. It reduces the risk of casting and controlling of the animal. The animal should be fasted for 12-25 hours before surgery.

In order to perform castration in standing position tranquilizers are essential. A sedative dose of chloralhydras in combination with tranquilizer (Sparin) for highly nervous horses is used. In most cases use of tranquilizer and an application of twitch on upper lip or ears will be good enough for this

operation.

After achieving sedation and controlling the animal, a right handed operator should stand on the left side of the horse. It is preferable to wash the scrotum and partly protruded penis with soap and water. With the left hand the testicles are held and the scrotum is anaesthetised by subcutaneous infiltration on the proposed line of incision, the procedure is repeated on the other testicle also. After infiltrating the scrotum the testicles are blocked by directly injecting in to the testicular mass with the help of a 3" long needle. 10 ml of local anaesthetic will produce the desired effect.

After waiting about 10 minutes the operation is started. With the left hand hold both the testicles and with right hand give incision from front to back on the line of infiltration, first on left testicle and then on right testicle. Let both testicles hang out. Tunica vaginalis is incised and the testicle is brought out. After careful dissection of the tunica vaginalis upto the upper most area, the spermatic chord and the tunia vaginalis are clamped together in the emasculator at two places. It is advisable to ligate the spermatic chord and the tunia vaginalis together. Transfix a No. 3 chromic catgut at the upper clamped part and ligate the chord first half and then encircling the whole chord. Testicle is removed from two inches below the ligature. similarly the left testicle is removed. The skin between the two incision is removed and the wound is left open for healing.

Animal should be given controlled feed for 2-3 days. It is advisable to provide an elevated ground level for hind legs for 24 hrs. Wound is dressed as usual and antibiotics are given for 5 days. Tetanus toxoid shot should be given if the animal is already not protected against tetanus. The animal should be given walking exercises after 48 hrs. If swelling of the scrotal area occurs it means the drainage of the wound is blocked and it should be restored by manipulation of the wound or walking the horse. In most cases the recovery is uneventful.

II. Sheath Wounds

There are plenty of folds of loose sheath in horse. In breeding stock the penis is regularly cleaned with water and mild disinfectant. Even in geldings

the sheath should be frequently cleaned. It has been noticed by the author that inspite of regularly cleaning the sheath, flies do get the opportunity to enter into its folds and lay eggs. With a couple of days this is turned in to maggot wound of the sheath. It could not be suspected that such animals can have maggot wound. A horse having such wounds was restless and moved in the stable. He was kicking with hind legs. It was thought of having some irritation in the solar surface of the foot. But after a while the sheath was examined and found to have maggot wound. It was treated and the horse became normal.

III. Vericosed Penile Veiens

such cases are very rare and the case under report has been observed by the author. A local farmer had a mare in heat and he asked a Tonga Owner to allow the services of his horse. Both the persons were inexperienced and they allowed the stallion to cover every day and tied him just near the mare. This situation did not allow the horse to retract his penis and for couple of days it remained in erect condition. Finally a treatment consisting of female hormone and cold water irrigation was given to the horse and the penis slowly retracted but incomplete.

After couple of months the owner asked me to examine the horse who had still partly hanging penis. Upon examination it was found that all the veins at the base of the penis were highly thick and hard and lost the elasticity completely. such changes are irreversible.

B. FEMALE

I. Ruptured Vaginal Wall

It has been found that during covering of the mare a tear in the vaginal wall occurs. Maiden mares are more prone to such condition. Even cases have been noticed in elderly mares, wobbler mares and highly nervous mares. More often the tear takes place around the oss uterus between 9 to 0' clock sites and rarely below the oss. It can be suspected when the stallion dismounts and there is blood on its penis. It can be either a unbroken hymen layer in maiden mare or a tear in the vaginal wall.

The mare will have pain and there will be frequent urination, slight straining. In order to confirm the diagnosis, either with the help of a speculum or pervaginal examination by hand will be advisable. The exact site and size of the tear should be ascertained and the line of treatment is considered accordingly.

If the tear size is small and above and or bit either side of the oss can be left undisturbed or couple of months till the tear has completely healed. If the tear is fairly big size, it should be sutured with the help of No. 1 or 2 chromic catgut. Arrangements are made in both the cases that hind part of the mare is elevated higher than the front leg and the mare is kept on light food and plenty of liquid be given so that she does not get constipated.

It is advisable to avoid one breeding season in cases where suturing was not done. It is my experience

that during next breeding season the mares got pregnant and foaled unevenly.

II. Pneumovagina

In young mares this a confirmational defect where the valva is sinking. In weak and poor old mares also such condition occurs. This defect allows the air to be sucked in the vaginal cavity. Dr. CASLICK, first of all advised that the vulval lips be sutured upto the level of pubic bone. This will prevent air to go in and consequently when the mare is in heat and the oss is open it will remain sterile. Even after breeding caslick operation should be done as soon as the mare goes off heat.

While foaling, it is advisable to cut this suture line a few days before due date. It can be best done while foaling when the mare is on the ground. But some times it is not possible to attend the case and then it will produce irregular tears in the vaginal wall.

III Rectovaginal Fistula

During foaling procedure the front limbs of the foal are first to come out of the birth canal. It will be always one of the leg will be ahead of the other by 6-10". If at this stage the position of the limbs is not checked for possible obstruction, chances are there that due to the foaling pressure one of the hoof may get stuck on the upper part of the vagina and tear it to the extent that the rectum communicates with the vaginal cavity.

Standard techniques of operation of this condition has been described in all books. Here the idea of the author is to emphasize the importance of the management of such cases before and after surgery.

It has been found that during cover-
ing of the mare a tear in the vaginal
wall occurs which makes the mare
prone to such condition even though
there is no rupture in rectal wall.

II. Prolapsed Vagina

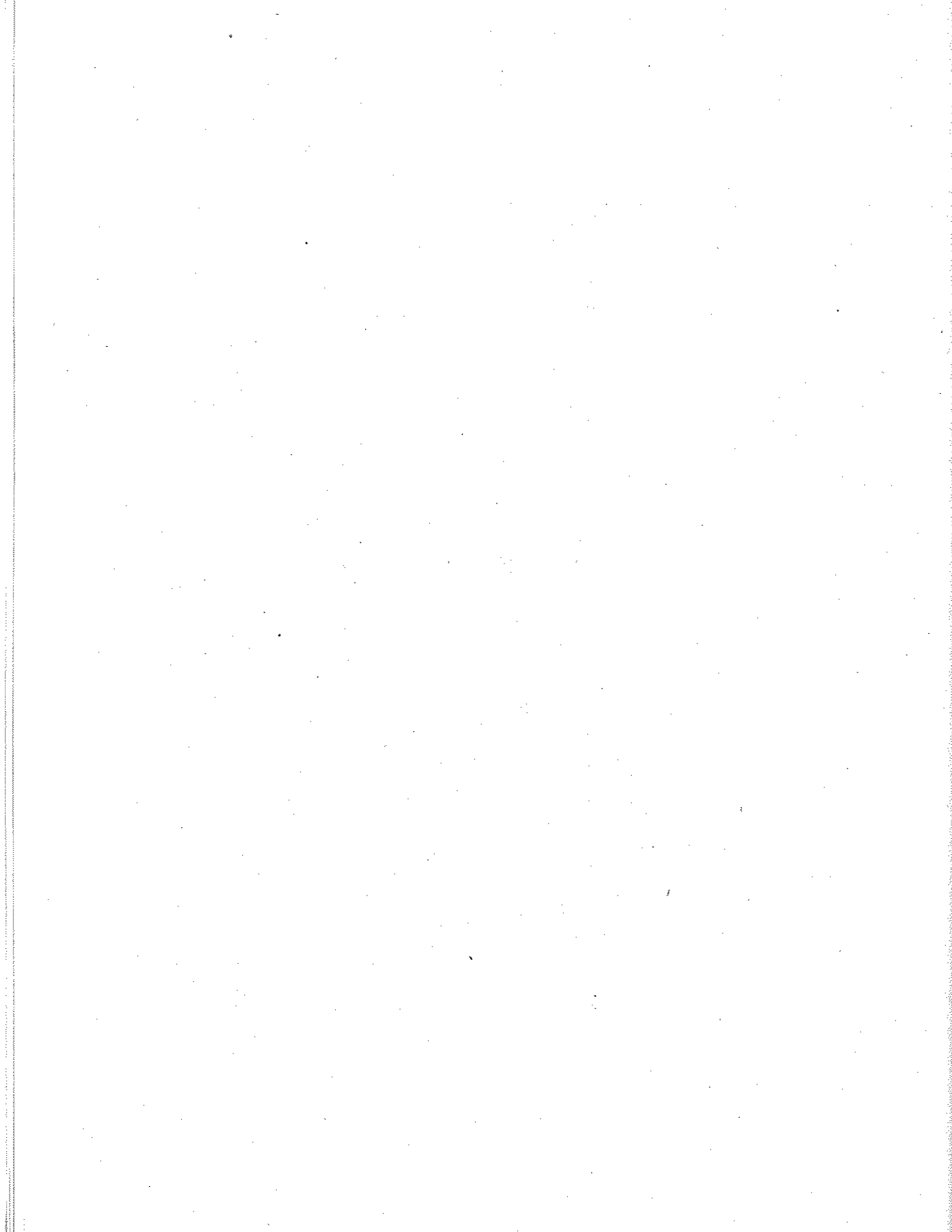
In young mares this condition is
not infrequently observed. It is
in such cases that the mare is
prone to such condition even though
there is no rupture in rectal wall.

If there is no rupture of the rectal
sphincter muscles and there is only a
hole in the rectal wall, I shall prefer to
wait for couple of months to do the
surgery. Meanwhile care is taken to
check the infection. During this time
the size of the hole in the rectum will
reduce tremendously to half or one
quarter of the original size. Very small
holes may heal completely. This will

facilitate the surgery and this hole can
be dissected out nicely into two separate
openings in the rectum and vagina.
These two holes are sutured as described,
vertical and horizontal manner. It is
advisable not to breed the mare for one
year and give complete rest. It has been
experienced that the success rate will be
very high in this manner.

□

SESSION II



Surgical Affections of Urinary System in Large Animals

Harpal Singh, M. V. Sc., Ph. D.
Dean Students Welfare

G. B. Pant University of Agriculture & Technology, Pantnagar (Nainital)

The importance of urinary system can not be over emphasised as it has its vital role to excrete the end products of tissue metabolism and maintain homeostasis with respect to fluids and solute by selective excretion of these substances. The affections of urinary system in small animals are well documented in relation to their incidence, diagnosis and treatment. However, in large animals, sporadic attempts have been made in different laboratories taking into consideration a particular disease. There is thus dearth of work, where system as a whole is studied in large animals.

The diseases of kidney and ureter are less frequently encountered in large animals, than the diseases of urethra and bladder. However, postmortem reports indicate that the incidence of diseases of kidney and ureter, which need surgical intervention, is more than observed clinically. This is probably because they fail to exhibit clinical signs unless they are very extensive.

Embolic nephritis, hydronephrosis and renal neoplasms, are few conditions which have been reported in literature and surgical intervention may be of great help in such conditions if unilateral involvement is there. The clinical signs reported in such cases, are those of

toxaemia, followed by uremia proteinuria and pyuria may be observed if urine samples are examined regularly. Unlike man where blood chemical changes following kidney damage are well characterized, little information is available for large animals. The normal BUN concentrations is within 25 mg/100 ml, but with renal damage the values may go as high as 350 mg/100 ml, depending upon the degree of renal damage. Hypochloreaemia is most constant finding. Generally, blood gas analysis shows metabolic alkalosis with moderate hypercarbia when pH, bicarbonate base excess and carbon dioxide tension (p_{CO_2}) are above normal. However, in many cases, no abnormality in acid base status may be seen. These changes are in contrast to non-ruminants, where metabolic acidosis develops with renal damage. Intravenous pyelography alone or in combination with pneumoperitoneography may be of help in diagnosing such conditions.

Report of primary lesions of the ureter are rare in large animals. The ureters are affected secondarily by the lesions of kidney or bladder. Renal neoplasms may spread to ureters and migrating calculi may cause obstruction of ureter. The involvement of ureters is generally manifested by severe pain and stiffness of the gait. Obstruction of the ureter may be detected by rectal

examination. The scope of surgical interventions in the involvement of ureters in the large animals is obvious.

The only congenital condition of bladder which is of surgical importance in large animals is patent or previous urachus. In this condition the urachus, which connects the urinary bladder with allantois in foetus, fails to get obliterated and a canal remains between the bladder and umbilicus through which urine discharges. It is commonly recorded in foals and calves. The diagnosis is generally made on the basis of clinical signs, i. e. discharge of urine through umbilicus and urethra simultaneously. However, contrast radiography by injecting contrast medium through umbilical opening may be of help in confirming the diagnosis. The surgical treatment consists of resection of patent urachus and suturing of the bladder at the site of the opening to prevent leakage of urine and formation of diverticulum.

Other conditions fairly uncommon and of less clinical importance in large animals include paralysis, displacement, dilatation and hypertrophy of the urinary bladder.

Urethral agenesis is not uncommon in calves. The prognosis in such cases is not favourable, however life can be prolonged by surgical intervention:

Calculi formation has been recorded almost in all species of domestic animals except pigs, irrespective of their age, sex, species and breed. However obstructive urolithiasis is more comm-

only found in male ruminants, than in other species. The presence of sigmoid flexure, relatively narrow urethral lumen and long urethral canal in cattle and vermiform appandage in sheep and goat make them more prone to urethral obstruction. A systematic study to work out the incidence of obstructive urolithiasis is lacking, but available literature shows that a large number of cases are treated every year and the disease is not limited by the boundaries of any particular region.

Though chemical composition of urinary calculi has been reported from the various parts of the country, but very little is known about the chemistry of their formation. In large animals which are herbivores, the urine is almost alkaline. At higher pH (8.5 to 9.5) calcium bicarbonate and phosphate tend to precipitate and may lead to crystal formation. If this precipitation occurs around a nidus then the calculi formation may occur. The nidus may be of any organic material including epithelial cast and bacteria. It has been demonstrated by immuno-chemical studies that precipitation is a generalized process and it does not rely on the presence of any single protein species. Further detailed studies are needed regarding the chemistry of calculi formation in different regions of our country as the type of calculi formation may vary with the type of fodder, soil and water of a particular region.

Nutritional changes which are said to cause urolithiasis include deficiency of Vit. A and magnesium and high intake of phosphates. The main components of calculi are silicates and

carbonates in grazing animals and phosphates in feedlots especially if fed much concentrates relative to roughages. Phosphate calculi in ruminants usually take the form of gummy sludge of microcalculi frequently seen adhering to preputial hair and they may impact the considerable length of urethra in young calves. Inadequate water intake and drinking of highly mineralized water (hard water) have been suggested as precipitating causes of calculi formation.

The presence of infection in urinary system is closely related to calculi formation. The contribution of infection may be direct in providing inflammatory debris to act as nidus to initiate mineralization. It also indirectly increases the pH of urine thereby reducing solubility of calcium and magnesium phosphate.

Disturbances in calcium, phosphorus and magnesium metabolism may contribute in calculi formation by increasing the output of these elements in urine.

The calculi may form in any part of the urinary system from renal pelvis to urethra, small calculi may be voided in the urine but the impaction of urethra particularly in male castrated ruminants is due to relatively large calculi. The common sites of urethral impaction reported are ischial arch and sigmoid flexure in bovines and vermiform appendage in small ruminants. However, in more than 70% cases urethral calculi are located in the sigmoid flexure, 16% in between ischial arch and sigmoid flexure and rest in ischial arch and neck of urinary bladder,

Obstruction of urethra causes a characteristic syndrome of abdominal pain with kicking at the belly, treading with hind feet, strenuous unsuccessful efforts to urinate accompanied by grunting and grating of teeth. Urethral perforation and urinary bladder rupture are common sequelae in untreated cases.

In early cases, bladder will appear distended, however, if obstruction is not relieved, perforation of urethra or rupture of urinary bladder occurs in about 45-72 hours. Radiographic examination of such cases is reported to be helpful in locating the site of obstruction in certain cases.

When bladder ruptures there is immediate disappearance of discomfort but anorexia and general depression develop as uremia sets in. Distension of abdomen becomes apparent and fluid thrill is detectable on percussion. Rectal examination may reveal presence of empty urinary bladder, however, some urine is always present in the bladder when the site of rupture is dorsum or neck of bladder. In these cases, the bladder hangs down in the abdomen.

In cases of urethral rupture, urine leaks into connective tissue of ventral abdominal wall and may spread as far as xiphoid, resulting into severe cellulitis and sloughing of involved skin.

Physical and biochemical examination of urine of normal and stone forming animals does not reveal any difference in specific gravity and pH of urine. However, concentration of creatinine and phosphorus is higher in stone forming animals. Sodium and potassium

have been recorded on lower side in affected animals. The biochemical analysis of blood reveals elevated values of B. U. N, creatinine; inorganic phosphorus and potassium, decreased calcium level and almost no change in sodium values. Haemoglobin and packed cell volume may be elevated due to dehydration.

Treatment of animals of urethral obstruction with moderately distended bladder and without seepage of urine into abdominal cavity is easy. In such cases calculi are removed through urethrotomy performed over the site of obstruction. Initially, post scrotal urethrotomy is recommended for removal of calculi. If calculi is far above, only then should ischial urethrotomy is to be undertaken. Indwelling polyethylene catheters have been recommended for 10—15 days post-operatively in such cases. The urethra should always be sutured, though some surgeons prefer to leave urethra unsutured after inserting the catheter.

In cases where urinary bladder has ruptured, paracentesis abdominis is performed and urine is evacuated from the abdominal cavity. Peritoneal dialysis may be helpful in such cases, which may be done by lavaging peritoneal cavity by sterilized normal saline mixed with some strong antibiotics.

Three main sites have been used to approach the urinary bladder, They are left paralumbar fossa, left prepubic

paramedian and para-anal approach. Out of these, first two appear to be more useful in most of the cases, however, para-anal approach may be used if, rupture is at the vertex of the urinary bladder. The suturing of the bladder wall should be leak proof for which lambert or continuous lock stitches are preferred. Normally absorbable suture material (catgut) is preferred over the non-absorbable suture material as the later may form nidus for the calculus formation by their permanent presence in bladder wall.

No significant work has been reported towards the post operative management of such cases. There is need to develop some field tests by which we can know the prognosis of cases, as well as we can plan the pre-operative and post operative therapy. Systematic work is needed to develop a line of treatment regarding type and amount of fluid and other drugs to be given on the basis of clinical signs and laboratory tests.

It is, thus, evident that affections of the urinary system are amongst the important surgical diseases of large animals which deserve to be basically studied regarding their etiology, diagnosis, prophylaxis and treatment. The losses suffered by Live-Stock owners, due to high incidence of urolithiasis, pose, a challenge for Veterinary Surgeons to recommend effective methods of prophylaxis and to develop simple surgical techniques.

“ Experimental model for the study of bovine urolithiasis ”

Dr. S. S. Marudwar and Dr. S. Sahu

Intrapelvic urethra was exteriorised through a crescent incision along the ischeal arch under epidural analgesia in male buffalo calves. The urethra was catheterised towards the urinary bladder and the catheter was fixed in urethra. A periurethral circumferential tourniquet to prevent possible leakage of urine between walls of the catheter and the urethra was applied. The other tip of the catheter was kept protruding out on the skin surface for two inches and anchored to the corner of cutaneous wound.

The protruding tip of catheter was closed by application of screw clamp to stop the urine flow from the bladder totally.

Advantages of the model :

a) It provided an easy access to

the urethral lumen and perfect cystometric readings could be recorded.

b) Frequent cystometric readings could be taken at periodic intervals without major manoeuvres.

c) Urine flow could be re-established without any further invasive surgery like uretrostomy or penectomy.

d) It provided good site for cystoscopy.

e) A convenient method for catheterization of ruptured urinary bladder for its non-suture repair.

f) It was convenient, less time consuming and less invasive procedure as compared to conventional ischeal site of urethrotomy.

□ □

Studies on the effects of Bilateral Ureter Liagation in Buffalo Calves.

S. K. Sharma, Mohinder Singh, Jit Singh, A. P. Singh and P. K. Peshin.

Department of Surgery and Radiology, Haryana Agricultural University, Hissar:125004

Effects of bilateral ureter ligation were evaluated in six buffalo calves. Uraemia in these animals was characterized by hypochloraemia, hyponatraemia and unchanged acid-base status. The

plasma calcium and inorganic phosphorus concentrations decreased significantly only at later stage. The changes in plasma potassium were nonsignificant. The mean rise in blood urea nitrogen

and plasma creatinine was 4.0 mmol/L/day and 108.73 μ mol/L/day, respec-

tively. There was evidence of haemodilution. □

“ Cystometry and urodynamic changes during experimental bovine urethral obstruction ”

Dr. S Marudwar and Dr. S. Sahu

Cystometry in 16 male buffalo calves with their intrapelvic urethra catheterized, revealed that immediately after the catheterization, there was a negative pressure in the urinary bladder to the tune of 0.4 mm Hg. Thereafter every four hour recording of the pressure showed a continuous rising trend up to 48 post obstructive hours. Subsequent to this time the pressure rise was not linear, instead a stage of plateau followed by the decline trend till the end of 72 post obstructive hour.

Another pilot study in a model was designed for introducing the known quantities of leukwarm normal saline and recording the cystometry as well as to monitor the condition of the bladder wall for distension, thinning and seepage through right laparotomy. It revealed a linear rise in cystic pressure till 1900ml of saline was introduced in the bladder. At this time the bladder wall thinning was to the

extent so as to loose its tone. This might have caused the appearance of a stage of plateau in the pressure rising trend. The decile in the intracystic pressure was found to be accompanied by the profuse seepage of fluid from the bladder wall when monitored for the right laparotomy.

Initial negative intra cystic pressure could be attributed to the negative intra abdominal pressure against the positive atmospheric pressure outside the body. The rising trend in the pressure thereafter could be readily attributed to the progressive accumulation of urine in the urinary bladder and the detrusor tonus. The stage of decline preceded by the stage of plateau could well be either to reduced urine filtration in response to the retrograde intra ureteral pressure or to the loss of bladder tone and also due to the seepage escape of urine in to the peritoneal cavity. □

" Uropathy consequent to experimental bovine urethral obstruction "

Dr. S. S. Marudwar and Dr. S. Sahu

Intrapelvic urethra was catheterized and obstructed in 16 animals. The urine flow obstruction was kept for 48 hours and for 72 hours in eight animals each. Three animals out of four died from intravenous fluid treatment group wherein 72 hours obstruction of the urine flow was maintained. Necropsy findings and histopathological examination revealed valuable information.

Cystometry of these animals which died during treatment showed that the seepage of urine took place somewhere between 49 to 52 post obstruction hours. This was also substantiated by moderate distension of abdomen at necropsy and varying quantities of fluid detected in the peritoneal cavity. Bladder wall was severely damaged, thinned, necrotic and leathery in feel. Histopathological examination of bladder, peritoneum, liver, lungs, heart and kidney revealed extensive degenerative changes.

Urine escaped from bladder was stagnant, hyperosmolar and had caused chemical and infective extensive peritonitis and accompanying extensive tissue

necrosis, water and electrolyte disturbances in the body of animal in addition to the reabsorption of excretory metabolites splashed on peritoneal surface.

Degenerative changes in the renal tissue in the form of round hyalinised bodies at the base of glomeruli in the lumen of renal tubules and atrophy of some of the tubules as well as glomeruli accompanied by hypertrophy of some renal tubules could be attributed to the progressive retrograde pressure buildup in ureters and renal pelvis consequent to urethral obstruction. This points towards definite attenuation of renal tissue and reduced renal functions during urethral obstruction in bovine.

Extensive peritonitis might have contributed the accompanying paralytic ileus and thereby disturbances in intermediate metabolism.

Once the urinary bladder ruptures or seeps, the bovine urethral obstruction does not only remain the threat to the health of animal in the form of urological stress but is also augmented with the independent stress posed by ensuing extensive peritonitis.

Changes in Cerebrospinal Fluid of Calves and Buffalo Calves During Uraemia.

Mohindar Singh, A. P. Ingh, Jit Singh, and P. K. Peshin

Department of Surgery & Radiology, Haryana Agricultural University, Hissar-125004

Changes in cerebrospinal fluid of calves and buffalo calves were studied following total nephrectomy and uropertoneum in both the species. The parameters investigated were acid-base status, urea nitrogen, creatinine and electrolytes. The changes in CSF-pH, HCO_3 , urea nitrogen and creatinine

paralleled that of blood but CSF- pCO_2 remained stable. The plasma changes in various electrolytes were reflected in the CSF. Study showed that during uraemia, the CSF of cattle and buffaloes does not maintain a tight homeostasis. □

“ Certain Biochemical Observation in Rupture of Urinary Bladder in Bovine Calves ”

S. K. Barua, S. N. Gogoi

Fifteen apparently healthy male bovine calves between the age groups of 10-12 months were used for the experiment where urethral ligations were applied to induce rupture of urinary bladders. The blood pH and biocarbonate levels revealed an increasing trend after 48 hours of application

of urethral ligation.

Similarly, the BUN and creatinine estimated revealed significant increase at 48 hours following ligation which declined to normal limit with 168 hours following treatment. □

“ Clinical and metabolic changes during experimental urethral obstruction in bovine ”

Dr. S. S. Marudwar and Dr. S Sahu

Experimental urethral obstruction was created for 48 and 72 hours in 9 male buffalo calves each. Vital signs like heart rate (HR), rate of respiration (RR), body temperature (T°C), interval between two consecutive ruminal movements in seconds (RM) and capillary refilling time (CRT) in seconds and biochemical constituents in blood and serum including blood urea nitrogen (BUN), blood glucose, lactic acid (LA), pyruvic acid (PA), lactic acid pyruvic acid ratio (L/PO), inorganic phosphate (Pi), and serum level of sodium, potassium, chloride, serum bicarbonate, calcium and total proteins (TP) were studied for three days before the experimental obstruction and average values were used as base data for comparison of these values with those observed during post obstruction period.

Postobstructive changes could be grouped in three major groups :

a) Those parameters which showed significant rise in pace with the duration of obstruction consisted of CRT, RM, BUN, bicarbonates Pi, potassium and LA,

b) Those parameters showing significant decline in their levels during the obstruction period consisted of calcium and serum chloride.

c) Those biochemical parameters whose levels changed either non significantly or did not show any specific pattern consisted of blood glucose, serum sodium, pyruvic acid L/P ratio and TP, so also the heart rate and respiratory rates amongst the clinical parameters.

Correlation studied between the parameters revealed a significant positive correlation between BUN, bicarbonates, Pi, potassium, RM and CRT, while significant negative correlation was found between BUN, chlorides and calcium.

□

Studies on the treatment of Uraemia in cattle with special reference to Water, Electrolyte and Acid-Base corrections.

P. K. Peshin, B. B. K. Kulkarni, I. S. Chandna, Jit Singh and A. P. Singh

Department of Surgery & Radiology, Haryana Agricultural University, Hissar-125004

Studies were conducted on 12 healthy calves (72-162 kg) divided equally in two groups. Uraemia was created in both the groups, by rupture of bladder. In both the groups, bladder was repaired 48 hours after its rupture. In one group, treatment included administration of 5% dextrose saline, calcium-magnesium borogluconate, sodium acetate, streptopenicillin, predenisolone and liver extract with B-complex. In

second group, the treatment was aimed at correction of acid-base derangement, electrolyte imbalance and total body water deficit alongwith predenisolone, streptopenicillin and liver extract with B-complex. Biochemical changes during uraemia and treatment in both groups shall be discussed. The study showed that treatment aimed at correction of metabolic defects and water deficit gave better results.

" Repair of Ruptured Urinary Bladder in Covine Calves - An Experimental Study "

S. K. Barua, S. N. Gogoi

Fifteen apparently healthy male calves between the age groups of 10-12 months were used for the experiment. The animals were divided at random into 3 groups as 'A', 'B' and 'C' consisting of five animals in each group. Urethral ligations were applied in all animals to induce rupture of urinary bladder. The rupture of bladder occurred between 35-58 hours following ligation which were repaired by suturing alongwith indwelling catheterisation in group 'A'; by peritoneal grafting alongwith indwelling catheterisation

in group 'B', and only by indwelling catheterisation in group 'C'.

Studies on the bursting pressure of the suture line after expiry of the 15th post operative day revealed highest bursting pressure (mm of Hg) in group 'B'. Histopathological studies revealed complete healing of mucosal and serosal layers in majority of the cases in group 'A' whereas complete mucosal and serosal healing was observed in group 'B' and 'C'.

Clinico-Physiologic response to the surgical reversal of Experimental Uroperitoneum.

Sukhpal Singh and B. Prasad

Department of Surgery & Radiology Punjab Agricultural University, Ludhiana, India

Surgical reversal of uroperitoneum was attempted in 12 calves by cystorrhaphy and peritoneal evacuation. No supportive therapy was instituted in 6 animals while antibiotic (Gentamycin), fluid (normal saline) and corticosteroids were administered in remaining 6 calves. Of the former 6 animals, 4 died and 2 survived for 72 hours. In the later group, 2 animals survived till 36 hours and the rest even beyond 72 hours following treat-

ment. The recovery was gradual among survivors. There was a precipitous drop in CVP following evacuation of peritoneal urine. With supportive therapy, MAP and CVP gradually recovered but heart rate remained elevated. Electrolytes showed gradual and steady improvement. Potassium and urea nitrogen in urine showed a drastic rise during post-reversal phase. While BUN cleared rather gradually, creatinine showed prompt clearance.

" Biochemical Studies in Blood, Saliva and Urine following Experimental Uroperitoneum in Calves "

Sukhpal Singh, and B. Prasad

Department of Surgery and Radiology, Panjab Agricultural University, Ludhiana

Uroperitoneum was induced in 6 clinically healthy calves by cystorrhhexis and was observed for variations in blood gases, haemodynamics and biochemical components Sodium, potassium, chlorides, BUN and creatinine in plasma, saliva and urine. A mild metabolic alkalosis with an ensuing pulmonary dysfunction, elevated heart-rate, progressive haemoconcentration and mild hypotension was noticed.

However, pH of saliva and urine did not show the same trend as in plasma. Urea nitrogen showed a steady rise in blood but dropped in peritoneal urine. Plasma sodium and chlorides did not show any drastic change. In saliva these tended to decrease marginally while in urine it was reverse. Potassium showed rise in plasma and saliva while in peritoneal urine it decreased.

' Efficacy of peritoneal dialysis and intravenous fluid therapy for the treatment of obstructive uropathy '

Dr. S. S. Marudwar and Dr S. Sahu

Urethral obstruction for 48 and 72 hours in eight buffalo calves each was created with peritoneal dialysis and intravenous fluid therapy twice a day for three consecutive days after release of obstruction.

Intravenous fluid therapy consisted of 0.85% saline 1000 ml mixed with 150 mg. oxytetracycline administered @ 20 ml/kg while the dialysing fluid was composed of 0.85% saline mixed with 15 ml novocaine and 150 mg oxytetracycline administered @ 20 ml/kg. The dwell time allowed was one hour. The blood, serum and the dialysate were analysed for important and biochemical parameters. In both the groups urinary bladders were treated by flushing with 200 ml of normal saline containing 100 mg oxytetracycline twice a day before administering the treatment.

In 48 hours obstruction group both treatments proved effective in restoring disturbed clinical as well as biochemical parameters to preobstructive levels. However, the rate was superior

with dialysis treatment. In 72 hours obstruction group, three animals out of four treated with intravenous fluid therapy died at various times during treatment period. Death of these animals could be attributed to the inability of the treatment to restore the clinical and biochemical parameters which might have proved toxic in levels to the health of those animals. Contrary, the peritoneal dialysis lead to faster restoration of disturbed clinical as well as biochemical parameters even after 72 hours of obstruction by way of compensating the reduced renal function, treating the peritonitis and correcting the paralytic ileus under the influence of antibiotic and procaine hydrochloride present in the dialysing fluid.

The peritoneal dialysis known for its capacity for compensating the renal function for purification of blood and as a treatment for peritonitis had also been found effective in successfully treating a clinical case of a bullock with ruptured urinary bladder presented for the treatment almost in condition of coma.

**" Cystometry , vesicoureteral reflux and urodynamics in bovine :
in vitro and in vivo studies . "**

Dr. S Marudwarf Dr. P. E. Kulkarni and Dr. S. B. Mehesare

Department of Surgery, P. K. V. Akola.

Eight fresh specimen from slaughter house of the urinary bladder with intrapelvic urethra and the part of ureters attached to it were collected in ringers fluid and subjected to experimenatation. The ureters and urethra were catheterized. At each time 200ml of leukewarm normal saline was introduced in the bladder and intracystic pressure, return of fluid from the ureteral catheter and the condition of the bladder wall were monitorred.

Similar monitoring was done in three buffalo calves wherein the ureter after severing was catheterised at kidney as well as at bladder end and the catheter ends exteriorised.

Mean values of the volumes of saline intioduced in the bladder and the mean values of intracystic pressure

plotted on the graph for both the in vivo and in vivo experiment revealed : intracystic pressure went on rising till the mean volume of saline 1600ml sd 230ml. in vitro studies whereaas, in vivo studies it was at 3500mi sd 150ml. The vesicoureteral reflux occurred in 6 out of 8 in vitro and in all three animals from in vivo stndies at mean intracystic pressure 1.6 sd 0.3 and 1.3 sd 0.09 mmHg and intracystic volumes of 2800 sd 310 ; ml 2600 sd 160 ml in vitro and in vivo respectively.

The mean volume and pressures at which the bladder wall started thinning and seeping were noted. At what pressure per square centimeter of bladder wall the seepage / rupture takes place was also found out from the data.

□

Arterial and blood gas variations of bone marrow blood following fracture and venous occlusion in dogs.

S. S. Sarda and Rama Kumar

Department of Surgery and Radiology Punjab Agricultural University Ludhiana, Punjab, INDIA

Twenty four clinically healthy dogs randomly divided into 3 groups of 8 animals formed the material of this study. Ligation of femoral vein, transverse fracture of tibia and a combination of both venous ligation and fracture was carried out in each group respectively. Bone marrow (metaphyseal) blood and blood from femoral artery and vein was repeatedly collected under aseptic conditions from normal limb and following these treatments after 72 hrs in all the groups.

The finding of this study was that positive correlations which were

seen between the marrow and arterial blood parameters (pH, PO_2 , PCO_2 and HCO_3) in normal bone were lost completely or partly following any of the above treatments. At places a weak negative correlation were observed between the arterial and marrow blood values. Following simple venous occlusion in group I a fall in the marrow oxygen tension was also observed. The results of the study are discussed in the light of alterations in marrow blood in relation to the arterial blood in cases of inflammatory and reparative processes going on in the bone in normal course and in the presence of venous occlusion.

SESSION III

Use of Horn Plates in Internal Fixation of Metacarpal / Metatarsal Fracture in Calves.

Dr. Rajendra A. S. Bhargava and J. V. Mehta

Division of Exp. Med. & Surgery, I. P. R. I., Patna-243172

The conventional metallic bone plates have unfavourable effects on bone remodelling because they prevent underlying bone being subjected to normal stresses. The horn plates, which are relatively flexible,

may reduce this so called stress shielding effect. With this view, this study was conducted in four male cow calves 1 1/2 to 2 years old to evaluate horn plates in the treatment of metatarsal / metacarpal fractures.

SESSION III

Acid base and blood gas variations of bone marrow blood following fracture and venous occlusion in dogs.

S. S. Singh and Rama Kumar V.

Department of Surgery and Radiology Punjab Agricultural University Ludhiana, Punjab, INDIA

Twenty four clinically healthy dogs, randomly divided in 3 groups of 8 animals formed the material of this study. Ligation of femoral vein, transverse fracture of tibia and a combination of both venous ligation and fracture was carried out in each group respectively Bone marrow (diaphysis) blood and blood from femoral artery and vein was simultaneously collected under anaerobic conditions from normal limb and following these treatments upto 72 hrs in all the groups.

The finding of this study was that positive correlations which were

seen between the marrow and arterial blood parameters (pH, pCO₂, pO₂ and HCO₃⁻) in normal bone were lost completely or partly following any of the above treatments. At places even negative correlation were observed between the arterial and marrow blood values. Following simple venous occlusion in group I a fall in the medullary oxygen tension was also observed. The results of the study are discussed in the light of alterations in marrow blood in relation to the arterial blood in cases of inflammatory and reparative processes going on in the bone in normal course and in the presence of venous occlusion. ○

Use of Horn Plates in Internal Fixation of Metacarpal / Metatarsal Fracture in Calves.

Gag Raj Singh, A. K. Bhargava and I. V. Mogha

Division of Exp. Med. & Surgery I. V. R. I., Izatnagar-243122

The conventional metallic bone plates have unfavourable effects on bone remodelling because they prevent underlying bone being subjected to normal stresses. The horn plates, which are relatively flexible,

may reduce this so called stress shielding effect. With this view, this study was conducted in four male cow calves 1½ to 2 years old to evaluate horn plates in the treatment of metatarsal /metacarpal fractures.

Identical midshaft transverse fractures of metacarpal / metatarsal bones (One bone at a time) were created under general anaesthesia in all the animals. The horn plates prepared from the horn of adult cattle were used to immobilize the fracture in all the animals. No external immobilization was used and the animals were allowed to move freely in the animal sheds. These animals were observed for the clinical signs mainly, swelling and infection at the site of operation and weight bearing on the affected limb. The animals were subjected for radiographic examination at 15 days interval for three months and thereafter at monthly interval for one year post-operatively.

The animals started bearing weight immediately after recovery from anaesthesia, though they remained lame for 15 days post-operatively.

However, thereafter, their gait remained normal through out the observation. No abnormal swelling was observed at the site of operation and wound healed with first intention in all the animals. The series of radiographs taken at different intervals showed well organized minimal callus formation and the plates were able to maintain perfect immobilization of fractured fragments through out the period of observation. It was interesting to note that plates remained intact and no signs of resorption of plates was present till the last observation (one year). The plates did not incite periosteal proliferation or osteoclastic reaction at the site of contact with the host bone. The radiographs taken after one year post operatively showed perfect remodelling of the callus without any untoward reaction,

○

Use of Horn Plates in Internal Fixation of Metacarpal / Metatarsal Fracture in Cattle.

Gag Raj Singh, A. K. Bhatnagar and J. V. Mehta

Division of Exp. Med. & Surgery, I. V. R. I., Bangalore 560072

may reduce this so called stress shielding effect. With this view this study was conducted in four male cow calves 1 1/2 to 2 years old to evaluate horn plates in the treatment of metatarsal / metacarpal fractures.

The conventional metallic bone plates have unfavourable effects on bone remodelling because they prevent underlying bone being subjected to normal stresses. The horn plates, which are relatively flexible,

The relation of the direction of traction and transfixation pinning on the alignment of fragments in bovine tibial fracture.

Ram Kumar V., B. Prasad, Arun Kumar Khanna and S- N. Sharma

Department of Veterinary Surgery and Radiology Punjab Agricultural University, Ludhiana, Punjab, INDIA.

Skiagrams of the fracture of tibia in 50 clinical cases were analyzed for the direction of deviations of fragments. The effect of traction and counter-traction applied in 5 varied directions to bring around a satisfactory alignment was studied. The possible biomechanical forces involved in deviation are discussed.

Methods for countering these forces while immobilising the fractures by transfixation pinning are suggested.

Overall observations showed that if due consideration is given to the above two factors, restoration of gait was enhanced with early ambulation of the animal during post operative phase.

○

Surgical affections of foot in camels.

T. K. Gablot, D. S. Chouhan and R. J. Choudhary.

College of Veterinary and animal sciences, Bikaner (Rajasthan)

Camels often suffer from a wide range of foot affections like sprain, fractures of digit, lacerations and bruises, punctured foot, abscessisation, osteomyelitis, exostosis, avulsion of nails etc. These affections lead to severe lameness and impair the entire utility of animals.

An altogether different anatomy and heavy weight of animal puts a

challenge to the surgeon for needful and effective treatment in order to restore the draught utility of the animal. Authors have attempted different treatments based on guidelines of bovine and equine foot surgery with a great success. The different foot affections and their surgical treatments are discussed in this paper.

○

Evaluation of different techniques for mandibular fracture repair in camel (Camelus dromedarius)

R. K. Purohit; R. J. Choudhary; D. S. Chouhan; P. R. Dudi; and (Mrs) C. K. Sharma

A five year study was made to evaluate different techniques for mandibular fracture repair in 30 adult male camels. In first group of 10 animals fracture repair was done by transfixation technique using stainless steel rod and the pins using a splint. In second group of 15 animals interdental wiring with 2 mm thick wire

or silver wire was done. In third group of 5 animals where both the above techniques failed and thus the amputation of anterior fractured fragment (including the incisors and canines) was done. The amputation was mandatory in old animals specially where fracture line was close to canine teeth.

Bilateral thoroughpin in Camel. (Camelus dromedarius) : A case report.

N. R. Purohit and D. S. Chouhan.

Department of Surgery and Radiology, College of Veterinary and Animal Science, Bikaner, (Rajasthan) 334001

Bilateral thoroughpin was recorded in a camel. The left thoroughpin swelling was larger and fluctuating involving most of the tarsal sheath enclosing the deep digital flexor tendon of the hind limb. While the right thoroughpin swelling was smaller. The animal was moving with a stiff gait and exhibiting pain during sitting down and getting up.

After draining the maximum of synovial fluid aseptically from both

the swellings, corticoids (Hostacortin-H, 10 ml) strepto-penicillin (Dicrysticin-S, 0.5 gm) and local anaesthetic (Xylocaine, 2% 3ml) mixture was injected into each of the tendon sheath. The treatment was repeated five times at the interval of 4 days. The swellings reduced to normal and did not recur. During treatment period the animal was given full rest.

Unilateral rupture of gastrocnemius muscle in camel. (*Camelus dromedarius*): A case report.

N. R. Purohit; D. S. Chouhan and P. R. Dudi.

*Department of Surgery and Radiology, College of Veterinary and Animal Science,
Bikaner, (Rajasthan) 334001*

Unilateral rupture of gastrocnemius muscle was recorded in a camel. The camel was unable to maintain the normal support at the affected hock. The hock kept flexed and appeared dropped, it further lowered during progression of the limb. The stifle and hip were in extension. A firm, large and painful swelling was observed on posterior aspect of the leg region.

Soft bed and complete rest were given to the animal. Injection Esgipyrin-25 ml I/m (Anti-inflammatory and analgesic) and injection Otcim-20 ml, I/M (Antibiotic) were given daily for 7 days. Since, there was no improvement even after a period of one month, it was advised for euthanasia. Post-mortem examination revealed complete tearing of the muscular belly.

○

Spastic form of lameness in Ongole Bullock.

K. Bhaskar Sing.

Veterinary Hospital, TENALI, A. P.

Spastic form of lameness in the right hind limb of a ongole bullock was studied and recorded for the first time in ongole cattle. The probable cause of the malady may be the chronic irritation of the right hock. The gastrocnemius tenotomy was performed through a lateral incision,

6 cm from the point of the hock, under local and epidural analgesia with lignocaine hydrochloride 2%, in the left lateral recumbency. Antibiotic umbrella was given for five days. Animal recovered from the lameness.

○

Unilateral rupture of gastrocnemius muscle in camel. (*Camelus dromedarius*).
A case report.

N. R. Prasad, D. S. Choudhury and P. R. Datta.

Department of Surgery and Pathology, College of Veterinary and Animal Science,
Bikaner (Rajasthan) 334001.

Department of Veterinary and Animal Science,
College of Veterinary and Animal Science,
Bikaner (Rajasthan) 334001.

Self bed and complete rest were given to the animal. Injection Eart-pyrin-28 ml (m) (Anti-inflammatory and analgesic) and injection Ocin-20 ml (m) (Antibiotic) were given daily for 7 days. Since there was no improvement even after a period of one month, it was advised for euthanasia. Post-mortem examination revealed complete tearing of the muscular belly.

Unilateral rupture of gastrocnemius muscle was recorded in a camel. The camel was unable to maintain the normal support at the affected hock. The hock kept flexed and appeared dropped, it further lowered during progression of the limb. The stifle and hip were in extension. A firm, large and painful swelling was observed on posterior aspect of the leg region.

Spastic form of lameness in Ongole Bullock.

Spastic form of lameness in the right hind limb of a Ongole bullock was studied and recorded for the first time in Ongole cattle. The probable cause of the lameness may be the chronic irritation of the right hock. The gastrocnemius tenotomy was performed through a lateral incision.

8 cm from the point of the hock, under local and epidural anaesthesia with lignocaine hydrochloride 2% in the left lateral recumbency. Antibiotic ampicillin was given for five days. Animal recovered from the lameness.

SESSION IV

SESSION IV

Congenital and Acquired Abdominal Disorders in Bovines—Clinical Cases

A. P. Singh, Jit Singh P. K. Peshin, S. K. Sharma, Mohinder Singh and Rishi Tayal

Department of Surgery & Radiology, Haryana Agricultural University, Hissar-125004

Six clinical cases of congenital and acquired abdominal disorders in bovines shall be presented. The cases include two cases of caecal dilatation and torsion (One each in a cow and a bullock), two cases of right abomasal displacement (One each in a

cow and a bullock) and two cases of congenital anomalies of excretory system in calves. The methods of diagnosis, surgical treatment, clinical chemistry and postoperative management shall be discussed.

□

Role of Surgical Technology in Allied Research in Sheep.

I. V. Mogha

Division of Experimental Medicine and Surgery Indian Veterinary, Research Institute, Izatnagar.

A variety of surgical techniques have been developed recently for basic and advanced studies. Some of the experimental surgical models have been practised in sheep. Total eight mature Merino Ewes (approx. 40 kg. body weight) were used for the purpose. One of the carotid artery of ewe was placed subcutaneously in a skin loope or cannulated on the day of faetal surgery. Four juguler vein and carotid artery cannulations were performed in four faetuses (in 110-115 days pregnant sheep) to study the physiological stress status in faetus in relation to dam. Blood

samples from faetus and dam were collected for acid and base and gaseous status in every 6-12 hours till the day of lambing and then sampling were continued for a week later after lambing. The abomasal and duodenal re-entrant cannulations were performed in four sheep for measurement of amount of digesta passing to these organs and for other isotopic and metabolic studies. The samples for metabolic study from abomasal and re-entrant duodenal cannulae were collected on 2, 4, 8, 12 and 24 hours after feeding and analysed the data as per requirement. A polye-

ethylene or silicone rubber cannulae were inserted into the foetal carotid artery and jugular vein after laparotomy of dam and subsequently hysterectomy were conducted for cannulation.

Samples were commenced approx. 4-5 days after the surgery when the sheep had started eating all the feed offered.

Paired blood samples : one from carotid artery and one from jugular vein, were taken [at various time intervals, into hypodermic heparinized syringe.

Both the experiments were successfully conducted. The surgical techniques [are easy to perform and useful for long time study.

Prognostic Factors in Bovine Diaphragmatic Hernia.

R. L. Bhardwaj, D Krishnamurthy, and P. K. Peshin

Department of Veterinary Surgery & Radiology, HAU, Hissar-125004

Nine animals with diaphragmatic hernia were subjected to herniorrhaphy by transthoracic approach. Blood samples were collected before the surgery and subsequently on the 3rd, 7th and 10th post-operative days to evaluate the prognostic significance of clinical signs, haematological tests and biochemical tests.

Dry matter content of the dung and analysis of ruminal fluid for pH,

histamine, tryptamine, tyramine and total volatile fatty acid were also included to know the suitability of the patient for surgery.

Among the 9 operated animals, only one animal died following thoracotomy. It is concluded that a large number of animals may be included to evaluate the prognostic significance of various parameters.

Disorders Associated with Diaphragmatic Hernia in Bovines

M. N. Nassimi, D. Krishnamurthy and P. K. Peshin

Department of Surgery & Radiology HAU, Hissar-125004.

Pre and post-operative general condition and digestive disturbance in 24 animals with diaphragmatic hernia were studied by recording i) elasticity of the skin ii) Pulse iii) respiration iv) temperature v) body weight vi) total feed intake and vii) total water intake.

The rate of passage of food through the digestive tract was studied in 12 animals (6 normal and, 6 affected) with the help of coloured wheat bhusa.

The elasticity of the skin was

reduced in pre-operative animals as compared to animals on 10th day of thoracotomy. The pulse and respiratory rate was low in patients prior to surgery. The body temperature was not found to be in the range of 'fever.' Data on body weight showed that the patients were gaining weight gradually after thoracotomy.

The rate of passage of food through the digestive tract was slow in affected animals as compared to normal animals.

□

“ Abomasal Impaction and abomasotomy ”

J. Mohanty, A. K. Ray and A. K. Mitra

Department of Surgery, Orissa Veterinary College, Bhubaneswar-3.

Ventral paramedian abomasotomy has been successfully performed in two cross bred cows suffering from acute abomasal impaction. In both the cases the condition developed just after parturition with over-feeding of concentrates for a few days. The case No. 1 was diagnosed while performing

ruminotomy but the second case was taken up immediately for abomasotomy when it did not respond to any medicinal treatment for releasing the abomasal impaction. The case was diagnosed by clinical examination and history.

For abomasotomy a 20 cm. incision was made between the midline and the right subcutaneous abdominal vein, starting approximately 6 cm. behind the xiphoid process and ending immediately cranial to the umbilicus. While opening the abomasum care was taken to avoid peritoneal soiling. Lavage of the abomasum was done through a polythene tube inserted inside. Following cleaning of the abomasum, Omasum was also partially emptied through the omaso-abomasal orifice. Catgut has

been quite satisfactory for the closure of the wound.

In paramedian approach the abomasum could be easily viewed for detailed examination but might be more stressful to the animal.

In both the cases intense fluid therapy with particular emphasis on replacement of the chloride deficiency has been given.

" Certain Biochemical and Haematological Changes in Experimental Bovine Peritonitis "

P. N. Sahay and D. Mohanty

Ranchi Veterinary College, Birsa Agricultural University, Ranchi-834007.

Diffuse peritonitis was experimentally induced in 5 buffalo calves by intraperitoneal inoculation of E. coli culture and dilute faecal suspension. The syndrome developed progressively and proved fatal to all the animals between 73 to 98 hours. Blood glucose declined significantly at the preterminal and terminal stages while plasma protein level exhibited the opposite trend. Blood urea nitrogen manifested a progressive

rise and at terminal stages there was two fold increase. Leucocytosis with moderate shift to left, variable pattern of total erythrocyte count and marginal increase in erythrocyte sedimentation rate were the consistent features. Packed cell volume increased significantly at later stages of peritonitis. Some of the features in buffalo calves were conspicuously different from those observed in other species.

Efficacy of Intermittent Peritoneal Lavage in Diffuse Peritonitis in Buffalo Calves.

P. N. Sahay, A. Mahapatra, A. K. Singh and A. J. Das

Royal Veterinary College, in a cattle and University, Patna

Intermittent peritoneal lavage (I.P.L.) was evaluated in 10 buffalo calves in which diffuse peritonitis had been induced experimentally. Normal saline solution with chlorotetracycline solution powder was employed as lavage fluid. In 5 animals where I.P.L. alone was used, there were improve-

ments in body temperature and lowered blood urea nitrogen content and survival rate was 100%. When I.P.L. was coupled with systemic antibiotic in the other 5 buffalo calves, the animals survived and the clinical haematology and biochemical values returned to near normal levels after

SESSION V

Biochemical Changes of Blood, Urine, Saliva and Cerebrospinal Fluid in Experimentally Induced Septic Shock in Calves

Department of Veterinary Pathology, Faculty of Veterinary Science, University of Patna

Septic shock was induced in 12 calves by the intravenous injection of 10% bacterial suspension (100 ml) of *Escherichia coli* strain 8701. The animals were divided into two groups. In the first group, the animals were treated with 100 mg/kg of chlorotetracycline solution powder intravenously. In the second group, the animals were treated with 100 mg/kg of chlorotetracycline solution powder intravenously and 100 ml of normal saline solution intravenously. The animals were sacrificed at 24, 48, 72, 96 and 120 hours after the induction of septic shock. The blood, urine, saliva and cerebrospinal fluid were collected and analyzed for various biochemical parameters.

On the 24th hour, there was a significant increase in serum total protein, albumin, globulin, urea, creatinine, bilirubin, and total cholesterol. There was a significant decrease in serum glucose, calcium, and magnesium. There was a significant increase in serum lactate dehydrogenase, aspartate aminotransferase, and alanine aminotransferase. There was a significant increase in urine protein, urine urea, and urine creatinine. There was a significant increase in saliva urea and creatinine. There was a significant increase in cerebrospinal fluid protein, cerebrospinal fluid urea, and cerebrospinal fluid creatinine.

Efficacy of Intermittent Peritoneal Lavage in Diffuse Peritonitis in Buffalo Calves.

P. N. Sahay, D. Mohanty, A. A. Khan and L. L. Dass

Ranchi Veterinary College, Birsa Agricultural University, Ranchi-7.

Intermittent peritoneal lavage (I. P. L.) was evaluated in 10 buffalo calves in which diffuse peritonitis had been induced experimentally. Normal saline solution with chlortetracycline soluble powder was employed as lavage fluid. In 5 animals where IPL alone was used, there were improvements in clinical and haematological

parameters but hypoglycemia and elevated blood urea nitrogen persisted and survival rate was 80%. When IPL was coupled with systemic antibiotic in the other 5 buff calves, all the animals survived and the clinical, haematological and biochemical values returned to near normal, five days after treatment.

"Biochemical changes in Blood, Urine, Saliva and Cerebrospinal Fluid in Experimentally Induced Septic Shok in Calves"

B Prasad and C. S. Celly

Department of Surgery & Radiology, Punjab Agricultural University Ludhiana-141004, India

Septic shock was induced in 12 male cow calves by strangulating a segment of bowel. Haemodynamic, acidbase, blood gas and electrolyte variations were studied upto 48 hours. All calves showed hypotension along with tachycardia and increased PCV, a tendency for metabolic alkalosis along with pulmonary dysfunction. Plasma did not show any electrolyte variation except for Potassium which showed

an increase. Saliva showed a marked increase in all electrolytes studied namely Sodium, Potassium and Chlorides, however, decreased Sodium and Chloride levels were seen in urine whereas urinary potassium did not show any change. Electrolyte variations in CSF followed more or less the same pattern as that of plasma.

" A Therapeutic Trial on The Reversal Of Experimentally Induced Septic Shock In Calves "

B. Prasad and C S. Celly

Department of Surgery & Radiology, Punjab Agricultural University, Ludhiana, India.

Septic shock was induced in 12 male calves by strangulating a segment of bowel. Forty eight hours after the creation of septic shock, these animals were subjected to the surgical resection of the strangulated segment and restoration of bowel continuity. No supportive treatment was given in 6 animals (group I) while the other 6 (group-II) received fluid therapy (Normal saline), an antibiotic (Ampicillin) and

a cardiotoxic drug (Lanoxin). Calves of group II exhibited improvement in haemodynamic status, and varying degree of restoration of electrolyte balance. No improvement in the blood gas and acid base status of the animal could be achieved. Paradoxical aciduria observed in 2 animals could return to normal pH by the present therapeutic regimen. □

A Suspected Case of Esophageal Paralysis in a Goat.

Parkash Kinjvadkar, T. K. Gahlot and D. S. Chouhan

College of Veterinary and Animal Science, Bikaner (Rajasthan)

Goats seldom suffer from esophageal paralysis. Review scanned so far revealed no trace of such case in goats. However, cases are reported in equines, felines and canines. A case suspected for esophageal paralysis was presented to our clinic in a goat.

Clinically animal had a foreign body in bolus from at its terminal portion just above the

cardia. Mass could be moved into the esophagus, manually. Animal was unable to perform its regurgitation, therefore was partially anorectic. The per-os fed ingesta could be seen directly falling from phary to cardia. An attempt was made to demonstrate the wall of oesophagus and foreign body in the esophagus by feeding 10% Barium sulphate paste. But this contrast material could not delineate the esophageal mucosa, instead it

directly passed into the stomach. Therefore contrast material filled stomach tube was passed through the esophagus and lateral radiograph was taken to demonstrate the partially obstructing feed mass in the esophagus.

A treatment of nervine tonics could not be of any use. The

prognosis was poor and the owner did not turn-up. But looking to its resemblance with cases of esophageal paralysis, it was thought to be worth reporting. Review scanned revealed that this malady could be possibly due to space occupying lesions in the brain area which monitor the vagal activity of the esophagus. The treatment was in vain in reported case also.

Oral Neoplasms in Bovines—A Report of Three Cases.

S. C. Ojha, A. T. Rao, A. K. Ray and J. Mohanta

Department of Surgery and Department of Pathology, Orissa Veterinary College, O. U. A. T., Bhubaneswar.

Two cases of Haemangiopericytoma in bullocks and one case of Epulis in a new born calf were detected and confirmed on histopathological examination. Haemangiopericytoma in both the animals originated deep from the right side of the inferior maxilla and the gums. In one case the neoplasm extended upto the level of mandibular symphysis resulting in dislodgement of all the incisors. While in the second case, the growth involved 2nd and 3rd premolars without any marked swelling or fistulous opening externally. Surgical

extirpation of the neoplasm along with necrosed portions of the bone was successfully undertaken and both the cases made an uneventful recovery.

Epulis was observed in a new born calf concomitantly with joint ill infection. The growths, which were sessile and irregular in nature, were confined around the base of all the temporary teeth of the lower jaw. No surgical intervention was required as the growths subsided gradually following vitamin therapy and improved nutrition.

□

Surgical Approach for Repair of Cleft Palate in Calves

S. M. A. Salam, J. Mohanty and S. C. Ojha

Department of Surgery, Veterinary College, O. U. A. T., Bhubaneswar.

Surgical exposure for reconstruction of cleft soft palate was evaluated in eight cross bred Jersey calves experimentally, following Bilateral Oral Commissurotomy and Mandibular Symphysiotomy approaches.

Mandibular Symphysiotomy approach provided adequate exposure and sufficient working space for undertaking repair of the full length of the cleft in the soft palate. In Bilateral Oral Commissurotomy technique, only the hard palate and anterior portion of the soft palate could be exposed,

However the symphysiotomy technique was found to be cumbersome, since it involved attainment of perfect stabilisation of the symphysis, following repair.

Postoperatively, complications like pneumonia, dysphagia, post-prandial nasal discharge and dehiscence of the soft palate was marked in all the calves in Bilateral Oral Commissurotomy group, while only one calf developed such complications when symphysiotomy approach was followed.

Experimental Studies on Metronidazole as A Topical Agent in Wound Healing

L. L. Dass, P. N. Sahay, U. K. Deokiouliyar, Md. Ehsan and A. A. Khan

Department of Surgery, Ranchi Veterinary College, Birsa Agricultural University, Ranchi-834007

Metronidazole was evaluated as a topical agent in wound healing. The efficacy was judged on the basis of clinical and histological observations obtained from 24 experimental wounds in buffalo calves. The findings were compared with 12 control wounds. The results showed that metronidazole

facilitated early filling of the gap in the wounds with preclusion of infective processes. Early development of adequate and mature collagen fibres was histologically discernible. These features were in sharp contrast to the control wounds.

Comparison of Prolene and Linen Suture Materials in Clean and Contaminated Wounds in Buffaloes.

A. K. Sharma, Amresh Kumar and Harpal, Singh, G. B. P. U. A, T, Pantnagar,

Prolene and linen were used as suture materials in clean and contaminated wounds. The contaminated wounds were prepared experimentally by injection of one ml of Staphylococcus aureus culture (viable count 538×10^6 /ml) at the wound site 24 hours before wounding. The wound healing was judged by clinical and mechanical evaluation and biochemical and microscopic examination of biopsy specimens at 3, 6, 9, 15, 30 and 90 days. A gradual increase in the breaking strength, tensile strength, extensibility and energy absorption was observed upto 90 days in clean wounds. The values of these parameters remained significantly low in contaminated wounds as compared to clean wounds ($P < 0.05$).

Hexosamine levels were higher in the early stages of repair which gradually decreased as the healing

progressed. The hexosamine content in the clean wounds was slightly higher in prolene sutured wounds. The decrease in hexosamine level was comparatively less in contaminated wounds compared to clean wounds. A gradual increase in hydroprolene and collagen contents was observed upto 90 days in clean wounds. The contaminated wounds had higher contents of hydroxyprolene and collagen in comparison with the clean wounds.

The microscopic examination of biopsy specimens revealed a higher tissue reaction in linen sutured wounds as compared to prolene. However, massive cellular infiltration and severe necrotic changes were observed in contaminated wounds. The healing and organisation of fibroblasts and connective tissue were better in prolene sutured wounds.

□

Sub-Conjunctival Abscess in Buffalo Calves.

K Bhaskar Singh

Veterinary Hospital, Tenali. (A. P.)

Six hundred and fifteen buffalo calves were treated from June 1979 to May 1984 at veterinary hospital, Guntur and Tenali of Andhra Pradesh.

Out of 615 buffalo calves affected with subconjunctival abscess, 51.55% were females. Maximum-number of 21.23% was seen in the 5th. month age group and minimum of 1.46% in the 1st. month. Maximum number of calves (19.36%) have been recorded during May and minimum (2.69%) during November months of the year. The eyes affected were left 56.76%, right 41.46% and both eyes 1.78%. Lower eyelid affected maximum- left eye 64.65%, right eye 54.48% and both

the eyes 72.73% *Thalizia* spp. worms were recovered from 39.33% of the cases.

Auriculopalpebral nerve block was more advantageous where the S. C. A. is deeply situated and when not ripened fully. Operation from internal side of the conjunctiva is more advantageous as compared to external opening. Rubbing of the internal operated part with silver nitrate stick (79.81%) is more advantageous than scrapping or scooping the part (20.48%). Application of Mastoid intramammary ointment to the internal operated part (68.78%) twice daily is more advantageous than giving antibiotic umbrella for five days.

Descemetocoele and its treatment by conjunctival keratoplasty in goat : A case report,

N. R. Purohit, D. S. Chouhan and C. K. Sharma,

*Department of Surgery & Radiology, College of Veterinary & Animal Science, Bikaner
(Rajasthan) 334001*

A goat with descemetocoele was successfully treated by performing conjunctival keratoplasty. Under general anaesthesia, the total conjunctival flaps were prepared by giving incision over the bulbar conjunctiva just near the limbus and continued around the circumference of the cornea. After undermining, the flaps were pulled over the descemetocoele and sutured. A protective bandage was applied over the

operated eye.

The conjunctival sac was flushed every day (2-3- times) with sterilized normal saline solution. After each flushing, terramycin ophthalmic ointment was applied the sutures were removed after two weeks. There was a complete healing. The conjunctival flap retracted in another weeks time.

□

Dermoid cyst in Camel. (Camelus dromedarius). Report on four clinical cases.

N. R. Purohit, D. S. Chouhan,, P. R. Dudi and U. K. Vyas

*Department of Surgery and Radiology, College of Veterinary and Animal Science, Bikaner
(Rajasthan) 334001*

The dermoid cyst were [recorded in four camels. The predilection seat is on the upper part of the neck on its lateral aspect, mostly over jugular vein. The rate of the enlargement was extremely slow, The cyst were clearly defined and of variable size. The cysts

were surgically enucleated. The centre of the cyst contained a mass of hair in a thick and pasty products of the glandular secretion, surrounded by thin coffee coloured fluid. Histological examination confirmed the diagnosis,

□

Dacryomastocoele and its treatment by conjunctival keratoplasty in goat: A case report.

M. R. Purohit, D. S. Chohan and C. K. Sharma

Department of Surgery & Radiology, College of Veterinary & Animal Science, Bikaner (Rajasthan) 334001

A goat with dacryomastocoele was successfully treated by performing conjunctival keratoplasty. Under general anaesthesia, the total conjunctival flaps were prepared by giving incision over the bulbar conjunctiva just near the limbus and continued around the circumference of the cornea. After undermining, the flaps were pulled over the dacryomastocoele and sutured. A protective bandage was applied over the operated eye.

The dacryomastocoele was surgically excised. The cornea of the eye contained a mass of fat in a thick and pasty product of the glandular secretion, surrounded by thin coffee colored fluid. Histological examination confirmed the diagnosis.

The dacryomastocoele was surgically excised. The cornea of the eye contained a mass of fat in a thick and pasty product of the glandular secretion, surrounded by thin coffee colored fluid. Histological examination confirmed the diagnosis.

The dacryomastocoele was surgically excised. The cornea of the eye contained a mass of fat in a thick and pasty product of the glandular secretion, surrounded by thin coffee colored fluid. Histological examination confirmed the diagnosis.

The dacryomastocoele was surgically excised. The cornea of the eye contained a mass of fat in a thick and pasty product of the glandular secretion, surrounded by thin coffee colored fluid. Histological examination confirmed the diagnosis.

The dacryomastocoele was surgically excised. The cornea of the eye contained a mass of fat in a thick and pasty product of the glandular secretion, surrounded by thin coffee colored fluid. Histological examination confirmed the diagnosis.

Therapeutic evaluation of canine gonorrhea

A. C.

Canine

A cooperative evaluation for the treatment of canine venereal disease was conducted in 24 animals of both the sexes presented to the university clinic. The study was conducted from 1958 to 1960. The study was conducted in a laboratory in which the dogs were kept in a separate building by specialists in the field of venereal diseases. The study was conducted in a laboratory in which the dogs were kept in a separate building by specialists in the field of venereal diseases.

well as localy

SESSION VI

Canine

J. M.

Canine

which

attached to the

SESSION VI

Therapeutic evaluation of canine venereal tumor.

A. C. Varshney O. P. Saxena V. K. Sharma Y. P. S. Dabas

College of Veterinary Science, G. B. Pant Univ. of Agri. & Tech., Pantnagar (U. P.)

A comparative evaluation for the treatment of canine venereal tumor was conducted in 84 animals of both the sexes, presented to the university clinics during the period Jan. 1980 Sept 1984. Tumor was excised in all female/male dogs either by episiotomy or by mid ventral prepuccial incision. However, in addition to surgical removal of tumor animals were given autogenous vaccine pentasodium antimony biscatechol - 3 : 5-disulphonate (Antimosan) parentally as

well as locally castration/ovariohysterectomy alongwith autogenous vaccine and castration/ovariohysterectomy alongwith Antimosan postoperatively. Recurrence in animals treated with simple excision (44.4%) autogenous vaccine (21%), antimosan (5%) and autoimmunization plus castration/ovariohysterectomy (8.3%) was observed, whereas, no recurrence was noticed in the animals where castration/ovariohysterectomy plus antimosan therapy was given

□

Venereal Sarcoma in a bitch - A case report

V. M. Jose (Subject Matter Specialist)

Veterinary Polyclinic, Kalpetta (Kerala)

A bitch, six years old, having the history of four normal previous litters, was presented with a mass protruding from the vagina since three weeks. The animal was otherwise normal

The mass was very vascular, pedunculated, about the size of a lemon and

attached to the floor of the vagina. Under general anaesthesia, using ether, the mass was ligated at its base and excised. Panhysterectomy was also done. The animal made an uneventful recovery. The growth was identified as Venereal sarcoma on histopathological examination.

□

Bicornual uterine prolapse in a bitch - A case report.

N. N. Balasubramanian Archibald David M. G, Richard Godfrey David (Department of Surgery)

Madras Veterinary College, Madras 600 007

A five year old N. D. bitch was admitted in the collegs clinic with the history of straining and prolapse of uterine mass since the previous night. The animal had whelped four live pups previous day. On examination it was found to be a case of bicornual partial prolapse of uterus. The uterine mucosa was congested

and since the owner was not willing for hysterectomy, the prolapse was reduced completely by external manipulation and internal traction by laparotomy. The surgical wound was closed as per standard technique.

The animal made an uneventful recovery.

Atypical adenoma of prostate in a dog.

Wakankar C. C. Jayarao B, M. Jalnapurkar B, V, Sharma S, Z.

Bombay Veterinary College, Bombay 400 012

A rare case of hyperplastic adenoma in a dog is reported.

A eight year old mongrel dog was presented with history of a swelling in the abdomen. Clinical examination revealed a mass of size of a coconut near the pelvic inlet. its caudal most limits being not easily palpable. Although otherwise normal, the dog had urinary tract infection as evidenced by urine examination. The contrast radiography showed an ill defined soft tissue mass ventral to the urinary bladder in the posterior abdomen. After controlling the urinary tract infection by appropriate treatment, the dog was taken for surgery.

Exploratory laparotomy was performed under general anaesthesia and the mass, attached ventrally to the neck of the urinary bladder was exteriorised. The capsule of the mass was carefully dissected from the bladder to expose the thin peduncle which was ligated and separated from its attachment. Laporotomy was closed in the routine manner and appropriate post operative treatment was instituted. However, the dog which was normal for 2 days died on 3rd day after vomiting once.

The pedunculated tumor was confirmed as hyperplastic adenoma of prostate by histopathology.

Obstinate case of symmetrical alopecia and feminization in a male pamaranian dog – Seminoma.

Dr. S. S. Marudwar Dr. P. E. Kulkarni (Department of Surgery and Gynaecology)

Punjabrao Krishi Vidyapeeth, Akola (M. S.)

A case of progressive symmetrical alopecia and symptoms of feminization in a three year old male pamaranian dog which did not respond to conventional treatments was referred. Clinical examination revealed the presence of right under developed testicle and absence of left testicle in the scrotal pouch. However, an enlarged mass of a big lemon size could be palpated on left ventral abdominal wall subcutaneously placed medial to left flap of the flank. Biopsy of the mass revealed the growth to be a seminoma.

Symmetrical alopecia observed on lateral and medial aspects of all four quarters, the tail, and ventral aspect of abdomen was accompanied by enlargement of mammary glands to some extent and tumification of the prepuce. The skin was melanic on most of the parts.

Surgical removal of the growth resulted in progressive regression of almost all symptoms except for the melanic skin as observed for two post surgical months.

Study on haematological & biochemical changes after subtotal cystectomy in canine

Sen T. B. (Department of Clinics) Mukherjee D B₂ (Ex-Professor of Surgery)

Bidhan Chandra Krishi Vishwa Vidyalaya

Sengupta J. (Lecturer in Pathology) R. G. Kar

Medical College, Calcutta

Subtotal cystectomy was done on six, adult, male, mongrel dogs. The experimental animals were divided on the basis of percentage of resection of urinary bladder into group 'A' and group 'B' with three having 75 % resection and three animals having 50% resection respectively. Prior to the time of resection every experimental animal served as its own control. The increased intravesicular pressure and the Surgical trauma resulting from resection of 50% or more of bladder

are expected to be followed by various post-operative haematological and biochemical changes.

The Haematological picture in general did not show any marked difference in the total count, differential count, Erythrocyte sedimentation rate, clotting time and haemoglobin percentage from the corresponding pre-operative values and there was no significant difference in the Blood Urea Nitrogen level during the pre-

operative and post-operative period rather in case of four experimental animals the post operative Blood Urea Nitrogen level was less by two to five Gram percent than the pre-operative level. The present work

therefore, opens an avenue for more detailed and elaborate study in cases of systectomy operations so commonly required to be done in canines as well as in human beings.



Surgical Management of urethral obstruction in a dog.

A. C. Varshney V. K. Sharma Y. P. S. Dabes O. P. Saxena

College of Veterinary Sciences, G. B. Pant Uni. of Agri. & Tech., Pantnagar (U. P.)

A two year Alsatian dog was presented to the clinics with a history of retention of urine and abdominal pain for last three days. Survey radiograph of abdomen revealed overdistention of urinary bladder and absence of any radio-opaque calculi in the urinary bladder/urethra. Positive contrast urethrography revealed obstruction at the base of os penis.

Carcinomatous growth of one cm. length obstructing complete luman of urethra was detected which was removed and in order to maintain the urethral continuity, the excised gap of urethra was repaired with the help of transplantation of autogenic cystic segment.



Urinary incontinence due to unusual vaginal fibroma in a bitch.

P. N. Sahay L. L. Dass A. A. Khan K. K. Singh

Ranchi Veterinary College, Birsa Agricultural University, Ranchi - 834007

A three year alsatian bitch had a two month history of straining at micturition and it was treated medicinally elsewhere. It had urinary incontinence Examination revealed a vaginal tumour arising from the left vaginal wall between the urethral meatus and cervix and protruding through vulval labia. The tumour was attached to the vaginal wall with a cord-like pedicle, and had rough surface with numerous irregular clefts and was of

rubbery consistency. There was no sign of inflammation or infection. Surgical excision of the tumour was accomplished under lumbar epidural anaesthesia. The heart shaped tumour weighed 63 g and was 5.2 cm. in length with a 3 cm. pedicle Pressure on the urethral meatus and interference in the free escape of urine were responsible for u.inary incontinence. Because of the benign nature of genital fibroma, surgical therapy was curative.



Vocal cords paralysis following endo-tracheal Intubation in a bitch

L. L. Dass P. N. Sahay A. A. Khan (Department of Surgery)

Ranchi Veterinary College, Birsa Agricultural University, Ranchi - 834001

General anaesthesia was induced in a four year alsatian bitch by I/V thiopentone with premedication by triflupromazine and atropine for spaying and venereal granuloma operations. Atraumatic intubation was done with cuffed endotracheal tube of 16 mm diameter and anaesthesia was maintained with ether by semiclosed technique for the operations lasting over an hour. One the following day the bitch could not bark and produced only a husky and muffled voice. Laryngoscopy under light general anaesthesia

revealed paralysis of vocal cords but no other laryngeal pathology. Irregular inflation of the cuff within the larynx due to defect in manufacture could be the possible reason for the malady. Initial therapeutic regimen consisting of injections of vit. B, B6 B12, dexamethasone and calcium gluconate and later regimen devoid of dexamethasone proved adequate. The bitch responded to this treatment but it was not until 27 days that restoration of voice was complete.



Spirocerca lupi a casual agent of oesophageal obstruction in dog.

(Radiographic study of a case)

Dr. S. C. Pathak Dr. A. K. Barman Dr. J. Saikia

Department of Surgery and Radiology Assam

University, Khanapara Guwhatta 22

A case of partial oesophageal obstruction in dog caused by the spirocerca lupi nodule was reported. The diagnosis was made by barium meal radiography and stool examination. The obstruction did not require surgical manouover. The medicinal treatment with Ancylool (Diso-

phenol Parenteral) at the dose rate of 4.5 mg (O. Im)/lb of body weight (2 inj. at 15 days interval) was sufficient to kill the worms and regress the nodule. No ova was found in the stool following the second dose of treatment and the obstruction was regressed.



External choke in a dog—case report.

Archibald David M G. Richard N. N. Balasubramanian Godfrey David

Department of Surgery, Madras Veterinary College, Madras - 7

A black male labrador of 2 years age with history of difficulty in swallowing and a large swelling on the lateral aspect of neck was presented on 15-3-84 at Madras Veterinary College Hospital Madras for investigation and treatment. Clinical examination revealed a hot painful fluctuating swelling. Radiological investigation revealed a sewing needle embedded in the swelling. The swelling was surgically opened and pus drained. The

foreignbody was removed. The side was irrigated with sterile normal saline and examined for damage. The oesophagus near the site of needle puncture was necrosed. Oesophagus encircling the necrosed portion was excised. End to end anastomosis was carried out by a series of eversion type of mattress sutures using 2/0 chromic catgut. Parenteral antibiotics were administered. The recovery was uneventful. □

Treatment of a wound on the forelimb of a lion (*Panthera leo*) A case report

P N George Jacob V. Cheeran A M Jalaluddin K Rajankutty C. Abraham Varkey

Department of Surgery, College of Veterinary and Animal Sciences, Mannuthy Kerala Agricultural University

A male lion, aged five years and weighing 100 kg approximately, sustained injuries on its forelimb and the foot pad due to fight with other lions in the cage. The wound on the forelimb was 15 cm long and on the paw 10 cm. It was not bearing weight on the affected limb. It was decided to anaesthetise the animal to examine the wounds and to ascertain if there was any fracture,

Xylazine 1G dissolved in 10 ml of the diluent was administered IM. Effects of anaesthesia were noticed by the fifth minute after the injection and the animal was under by the 11th minute. Atropine

40 mg was administered IM. The edges of the wound were freshened and sutured. Penidure LA 24 was given IM. The animal started showing swallowing and pain reflexes by the 40th minute and recovered from anaesthesia after four hours. Penidure was repeated on the fifth day. The wound healed by first intention. The sutures were removed on the 12th day under Ketamine anaesthesia. Ketamine 1400 mg (100 mg in 1 ml) was injected IM. The animal was under anaesthesia by 25 minutes and the sutures were removed. The animal recovered two hours after the injection.

Amputation of the tail in a lion (*Panthera leo*) A case report

P. O. George Jacob V. Cheeran K. N. Muralædharan Nayar S. Ravindran Nayar T. Sarada Amma
K Rajankutty


*Department of Surgery, College of Veterinary and Animal Sciences, Mannuthy
Kerala Agricultural University*

One of the male lions, aged about five years weighing approximately 100 kg, belonging to the Trichur Zoo, had its tail bitten off by other lions during a fight, leaving a lacerated stump about 30 cm long from the base. Lacerations being severe, amputation of the tail, at its base over the healthy region was resorted to.

Xylazine (Rompun - Bayer) 1 g dissolved in 10 ml of diluent supplied was administered IM. The animal was excited at the time of injection. By six minutes, the effect of anaesthesia could be noticed and the animal assumed lateral recumbent

position and was under by 14 minutes. Atropine sulphate 40 mg was also administered IM to check salivation.

Amputation of the tail was performed in the usual manner, over the healthy tissue. The stump that remained after suturing was only 10 cm long. Penidure LA 24 was injected IM, after the operation. The animal remained in a position of lateral recumbency for five hours and could stand up in another one hour. Penidure was repeated again on the fifth day. The wound healed up by second intention in three weeks.



Amputation of the tail in a lion (Panthera leo) A case report

P. O. George, Jacob V. Chazren, K. M. Muralidharan Nayar, S. Ravindran Nayar, T. S. Sadas Anna
K. Rajakutty

Department of Surgery, College of Veterinary and Animal Sciences, Manipal
Kerala Veterinary University

One of the male lions, aged about five years weighing approximately 100 kg, belonging to the Tichit Zoo, had its tail bitten off by other lions during a fight, leaving a lacerated stump about 30 cm long from the base. Lacerations being severe, amputation of the tail at its base over the healthy region was resorted to.

Xylazine (Rompun - Bayer) 1 mg/kg dissolved in 10 ml of diluent supplied was administered IM. The animal was excited at the time of injection. By six minutes the effect of anaesthesia could be noticed and the animal assumed lateral recumbent position. The 10 ml of diluent was injected into the lacerated stump. The animal was held in lateral recumbent position and was under by 15 minutes. Atropine sulphate 40 mg was also administered IM to check salivation. The animal was held in lateral recumbent position for 15 minutes. Amputation of the tail was performed in the usual manner over the healthy tissue. The stump that remained after cutting was only 10 cm long. Penicillin LA 24 was injected IM, after the operation. The animal remained in a position of lateral recumbency for five hours and could stand up in another one hour. Gabapentin was repeated again on the fifth day. The wound healed up by second intention in three weeks.

SESSION VII

Neuroleptanalgesia by meperidine and promazine in dogs

Amresh Kumar N, S. Jadon Bharat Singh

Department of Surgery & Radiology, College of Veterinary Sciences

G. B. Pant University of Agriculture & Technology, Pantnagar (Nainital) U. P.

A combination of meperidine hydrochloride (A) 5 mg/Kg and promazine hydrochloride (B) 5 mg/Kg intramuscularly or intravenously produced a marked neuroleptanalgesic effects in dogs for 35-55 minutes. It produced a significant increase in heart rate, mean arterial blood pressure and a slight decrease in respiratory rate, mild increase in CVP and no marked alteration in EKG after their administration slight rise in PCO₂ and a decrease in pH at maximal depth of analgesia were noted. The standard bicarbonate and base excess remained within normal range, mild erythrocytopenia and leucopenia and a decrease in haemoglobin and packed cell vo-

lume at maximal analgesia were the changes in haemogram. The changes in biochemical parameters included a significant increase blood glucose and insignificant effect on blood urea nitrogen and creatinine at maximal depth of analgesia. The serum electrolytes (Na⁺, K⁺ and Cl⁻) were not significantly affected. The minor alterations in haemocytological and biochemical parameters were compensated in 24-48 hours. The combination of meperidine hydrochloride and promazine hydrochloride were tolerated well and no complications were observed and this combination of drugs can be successfully used in clinical procedures. □

Cardiovascular changes during ether anaesthesia in buffalo calves.

K. N. M Nayar R P S. Tyagi

Department of Surgery, College of Veterinary Science, Hissar

Cardiovascular changes under ether anaesthesia were studied in four groups of seven buffalo calves each, with ether inhalation in the first group, with Chloral hydrate 6% solution IV in the second group, Thiopentone sodium 5% solution IV in the third group and premedication with Triflupromazine followed by Thiopentone sodium 5% solution IV in the

fourth group. In all the animals anaesthesia was maintained for 90 minutes with ether inhalation administered in the semi-closed system.

The parameters studied were ECG, BP, and CVP. Heart rate, MAP and PP were calculated from the recorded values. Tachycardia was noticed during induction

in all the four groups but during maintenance and recovery the heart rate was within normal limits. Progressive hypotension was noticed during induction and maintenance of anaesthesia in all the animals, the values being statistically significant - Fall in CVP was seen during anaesthesia but the difference was not

statistically significant. The ECG changes were AVD and AVB with the administration of ether. Only secondary T wave changes were seen during maintenance of anaesthesia. Discontinuation of ether did not produce marked reversal of hypotension or fall in CVP.



Metabolic stress and anaerobiosis During electroanaesthesia

D. K Sharma and Hariwir Singh

Department of Anaesthesiology

Post-Graduate institute of Medical Education & Research Chandigarh - 160012

Metabolic stress and anaerobiosis during electroanaesthesia has been studied after conducting 80 trails on 20 experimental studies on dogs. Electroanaesthesia was induced and maintained by using mono and biphasic forms of low frequency (500-1000 hz) square waves high frequency (10,000 hz - 40,000 hz) square and sine bursts and combinations low frequency square and high frequency sine bursts in interference pattern. Plasma/serum cortisol, blood sugar, lactate dehydrogenase (LDH), Lactic acid, pyruvic acid and excess lactate levels have been estimated and compared during various phases of electroanaesthesia. A rise in cortisol, blood sugar, LDH, Lactic acid and excess lactate levels was noticed during induction of electroanaesthesia which

tended to come to normal values after termination of E. A. currents. In the groups where E. A. was induced and maintained by low frequency square waves these changes were more prominent and significant. In the groups where E. A. was induced and maintained by monophasic forms of high frequency square bursts and high frequency sine bursts these changes were significant but less prominent. In the groups where E. A. was induced and maintained by the aforesaid combinations of the wave forms in interference pattern i. e. combinations of low frequency square and high frequency sine bursts these metabolic changes were minimum indicating least metabolic stress, no evidence of anaerobiosis and least muscle activity.



Efficacy of diazepam-pentazocin combinations in clinical practice in canines.

S. K. Pandey; V. P. Chandrapuria and S. M. Shrivastava

*College of Veterinary Science and Animal Husbandry
Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur*

Diazepam was injected @ 2 mg, 2 mg and 3 mg/ kg body weight and pentazocin @ 3 mg, 4 mg and 4 mg/ kg body weight intramuscularly and intravenously in treatment group I, II and III respectively. In animals of treatment group I effective sedation and analgesia was not achieved while in animals of group III drop in body temperature and pronounced depression of respiration was noticed and one hysterectomized bitch died after 18 hours of sedation.

Diazepam (@ 2 mg/kg body weight) and pentazocin (@ 4 mg/kg body weight) were given (intravenously and intramuscularly) to 80 clinical cases comprising of venereal sarcoma and episiotomy (13), orchiectomy and venereal sarcoma (8), Ovarohysterectomy (20), intramedullary pinning (18), haematoma

of ear (9), removal of anal glands (4), umbilical hernia (1), testicular tumor [4], removal of Harders gland (5), mammary tumour (7), dermoid cyst of eye (1) and amputation of penis (1). Intravenous administration gives uniform effects as compared to intramuscular injection. The onset of effects was 30 minutes by intramuscular injection and 7 minutes by IV injection on an average. Although animals remain under sedation for an average period of 2 hours the analgesic effects lasted only for the average duration of 40 minutes.

Retention of urine was noticed in 8 patients which resumed normally after 24 hours of operation. Vomition was noticed in 3 animals 30 minutes after diazepam, pentazocin administration. □

Diazepam-pentazocin induced clinical and haematological changes in canine surgical patients

S. K. Pandey

*College of Veterinary Science and Animal Husbandry
Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur*

The study was carried out in 7 clinical patients operated for ovarohysterectomy (3) intramedullary nailing (2) and ear haematoma (2) after intravenous adminis-

tration of diazepam @ 2 mg/Kg body weight) and pentazocin @ 4 mg/Kg body weight) Temperature, pulse and respiration were recorded before administration, pre

and post operation at an interval of 30 minutes up to 6 hours and at 24, 48 and 72 hours after administrations while blood samples were collected before administration and 2, 6, 24, 48 and 72 hours after administration of diazepam and pentazocin.

Significant decrease in body temperature and respiration was noticed. There was an initial increase in heart rate which decreased and became insignificantly below normal level.

Total erythrocytic count, haemoglobin, packed cell volume and erythrocyte sedimentation rate did not change significantly, although there was an apparent reduction in packed cell volume. However a significant reduction in total leucocytic count was noticed which continued to be sub normal up to 48 hours and attained almost normal value by 48 hours. The differential leucocytic count revealed significant neutropenia and eosinopenia and significant lymphocytosis.

Combelen as tranquilizer in buffaloes

Bharat Singh; Amresh Kumar; N. S. Jadon and H. P. Singh

*Department of Surgery and Radiology, G. B Pant Uni. of Agri. & Tech.,
Pantnagar (Nainital)*

Combelen @ 1 ml / 20 kg body weight intravenously or intramuscularly produced adequate tranquilization lasting for 40-70 minutes. The extent of tranquilization and analgesia was greater after intravenous administration. The onset was evident in 5-9 minutes. It was quicker after intravenous administration. There was a mild decrease in heart rate respiration rate and rectal temperature which was slightly greater after intravenous dosage. A slight decrease in mean arterial pressure and CVP and insignificant effect on EKG was observed during period of tranquilization. The intravenous administration of combelen produced a mild increase in PCO₂ and a decrease pH, however no appreciable effect was observed in base-excess and standard bicar-

bonate. Combelen administration was accompanied by a slight decrease in total erythrocytes, packed cell volume and haemoglobin concentration at maximal depth of tranquilization. There was a significant increase in blood glucose which was slightly greater after I. V. dosage. No significant effect on blood urea nitrogen and creatinine was observed. serum electrolytes (Na⁺, K⁺, Cl⁻) were also not significantly affected after combelen administration. It is recommended that combelen can be successfully used to produce tranquilization and in combination with local or regional anaesthetics can be used to perform various clinical surgical procedures on different regions of the body.

SESSION VIII

SESSION VIII

Potentiation of Epidural analgesia by amyl alcohol and benzyl alcohol in goats

Bharat Singh; Amresh Kumar, N. S. Jadon and V. K. Sharma

*College of Surgery & Radiology, College of Veterinary Sciences
G. B. Pant University of Agriculture & Technology, Pantnagar (Nainital)*

The epidural administration of 0.25-0.5 ml amyl alcohol or benzyl alcohol significantly increased the duration of epidural analgesia up to 5-25 days. The lignocaine hydrochloride (1 ml) was administered epidurally before amyl or benzyl alcohol. The maximal effect was attained in 7-10 minutes. Benzyl was more effective than amyl alcohol. The physiological parameters like respiratory rate, heart rate, rectal temperature, mean arterial blood pressure were not significantly affected. There was no significant change in various haemocytological and biochemical parameters like blood glucose, blood urea nitrogen, creatinine, serum electrolytes (Na⁺, K⁺ and Cl⁻) during the period of study. Acid base

parameters like P_{CO}2, PH, standard bicarbonate and base excess were not affected in any of the group of animals. There were no marked changes in composition of cerebrospinal fluid.

The degree and extent of analgesia was judged by observing the flaccidity of tail sensory reaction to pin pricks at tail, sacral, inner aspect of thigh and perineal region. Two animals of 0.5 ml benzyl alcohol group showed involuntary urination. There was adequate relaxation of anal and vulvar orifices. No untoward reactions were observed after amyl alcohol benzyl alcohol administration and it can be used successfully to control straining in goats.

□

Comparative studies of anaesthetic properties of bupivacaine and lignocaine hydrochloride in cross bull calves

Dhakate M. S.

Veterinary Polyclinic, Akola

Experimental studies to compare the anaesthetic properties of Bupivacaine hydrochloride and lignocaine hydrochloride were undertaken on 36 crossbred bull calves. For epidural anaesthesia, achieved by injecting 2, 4, and 6 ml of either

anaesthetics in groups one to six respectively. The latent period in group one, two and three were significantly more than the group 4, 5 and 6, but had highly significant duration of action as compared to that of 2% lignocaine hydrochloride.

□

Comparative studies of procaine Hcl with benzyl alcohol as long acting epidural anaesthetic in buffaloes

Syed Sajjad Hussain and Amresh Kumar

Asstt. Research Officer, Faculty of Vet. Sci, & A. H.

Baghi Ali Mardan Khan Nowshara Shrinagar, Kashmir 190011

The following combinations by way of epidural administration were tried in 9 clinically healthy buffalo calves.

i) Procaine Hcl 2% at the rate of 0.1 ml per kg

ii) Procaine Hcl 2% - ammonium sulphate 10% at the rate of 0.05 ml/kg

iii) Procaine Hcl 2% ammonium sulphate 10% - Benzyl alcohol 60% at the rate of 0.01 ml/kg body weight in three groups of animals.

The onset of analgesia varied from 5.0 ± 2.0 to 6.0 ± 2.0 minutes in all these groups of animals. The duration of caudal epidural analgesia varied significantly between these groups. The single injection of procaine Hcl 2% epidurally produced caudal analgesia lasting 60.0 ± 7.0 minutes. The ammonium sulphate

administration did not significantly affect the duration of analgesia. However, the administration of benzyl alcohol along with procaine Hcl and ammonium sulphate, increased the duration of caudal analgesia significantly to 10.0 ± 3.0 days.

The degree and extent of caudal analgesia was determined by observing the flaccidity of tail, sensory reaction to pin pricks to the tip and root of the tail, perineum, inner aspect of thighs and the skin around anus and the suspended defecation.

These drug combinations do not have any deleterious effects on various organ systems, and can be effectively used in clinical cases.

□

Study on the intravenous retrograde regional anaesthesia of hind limbs in cattle

S. P. Mehasare M. D. Narkhade and P. E. Kulkarni

Punjabrao Krishi Vidyapeeth, Akola

Intravenous retrograde regional anaesthesia with procaine hydrochloride using 1% and 2% solution with addition of 4%, 6% and 8% alcohol was carried out in 40 cow calves. The treatment design was as given below:-

1. 1% procaine hydrochloride solution with 4% alcohol.
2. 1% procaine hydrochloride solution with 6% alcohol.
3. 1% procaine hydrochloride solution with 8% alcohol.

4. 1% procaine hydrochloride solution.
5. 2% procaine hydrochloride solution with 4% alcohol.
6. 2% procaine hydrochloride solution with 6% alcohol.
7. 2% procaine hydrochloride solution with 8% alcohol.
8. 2% procaine hydrochloride solution.

All the 8 treatments were given in two groups i. e. A. and B. In 'A' group the duration of tourniquet was for 40 minutes and 'B' group the duration of tourniquet was for 60 minutes.

It was found that the latent period for onset of anaesthesia was least i. e. 99.08 seconds for anaesthetic solution containing 2% procaine hydrochloride with 6% alcohol.

The normal sensation reappeared in 66.16 seconds in 1% procaine hydrochloride with 4% alcohol and in 271.66 seconds in 1% procaine hydrochloride solution after release of tourniquet of 40 and 60 minutes duration respectively. The same value for 2% procaine hydrochloride with 4% alcohol and 2% procaine hydrochloride with 6% alcohol were 122.83 and 249.33 seconds respectively.

Haematoma was recorded as a post intravenous injection complication in six animals only. It was found that solution containing 2% procaine hydrochloride with 6% alcohol has minimum latent period and the maximum duration of anaesthesia after release of tourniquet as such this combination was found to be suitable for intravenous retrograde regional anaesthesia in hind limbs of cow calves without any serious complications.

Therapeutic use of epipleural novocaine blockade in treatment of primary indigestion in animals

B. R. Thaker, M. R. Patel and, M. N. Mannari

College of Veterinary Science, and Animal Husbandry, Anand Gujarat 388001

Inj. of 0.5% Novocaine at the dose rate of 1 ml per Kg. body wt. in epipleural space has been tried in clinical cases of primary indigestion at the veterinary college hospital Anand

Therapy was carried out on 98 clinical cases of primary indigestion. These animals were put in to three treatment trial groups:-

- a. epipleural novocaine blockade 28 cases.
- b. conventional method 18 cases
- c. conventional method supplemented with epipleural Novocaine blockade 52 cases.

Clinical findings (rectal temp, pulse respiratory rates.) haemogram (H. PCV. TIC /, TEC) and ruminal fluid analysis (colour, odour, PH, TVFA) were studied before and after 48 hours of treatment in three groups of primary indigestion cases

The study has definitely indicated that the conventional treatment was required to be given for longer time to bring the recovery, while epipleural novocaine blockade resulted in to a quicker recovery

Continuous Epidural anaesthesia in Bovines

S. B. Thakur, K. K. Mudris and M. N. Mannari

Gujarat Veterinary College, Anand

Continuous epidural anaesthesia was tried in 10 experimental animals by repeated injections of a long acting local anaesthetic, bupivacaine 0.5% through a polythene tubing fixed inside the epidural space. The average dose of 0.5% bupivacaine was found to be 0.15 mgs/kg body weight in cows, while in calves, it was found to be 0.30 mgs/kg body wei-

ght. On repeated injections no reduction in doses was found. The duration of anaesthesia after each injection varied from 60 to 200 minutes. The overall average being 146 minutes. No increase in duration of anaesthesia was found on repeated injections. Tachyphylaxis was encountered in 3 cows. □

Estimation of intraocular pressure During retrabulbar and auriculopalpebral nerve Block in male buffalo calves (*Bubalis bubalis*)

V. S Panchbhai; P. E. Kulkarni and L. B. Sarkate

College of Veterinary & Animal Sciences, MAU, Parbhani

The study includes the intra ocular pressure (IOP) recorded on 30 male buffalo calves of the age group of 1 to 1½ years after retrabulbar and auriculopalpebral nerve blocking. The IOP was recorded by Schiötz tonometer. The IOP observed at 0, 5, 10, 15, 20, 25, 30 and 35 minutes interval was 14.56 ± 0.52 , 11.28 ± 0.66 , 8.74 ± 0.56 , 7.41 ± 0.52 , 7.70 ± 0.29 , 8.20 ± 0.99 , 11.70 ± 0.76

and 16.70 ± 1.10 of mm Hg respectively. It was observed that values of IOP declined at every interval from 0 to 20 minutes and stabilized to normal 35th minutes. □

The difference of IOP at 0, 5 and 10 minutes interval were observed statistically significant whereas at 15 and 20 minute interval were non significant. □

Importance of preconditions and preoperative care of sheep prior to cardiopulmonary bypass (CPB)

Shakedian, Hovav, Mironov, S. A. and Tirosh, I.

See *Chin. J. Foreign Med. Sci. Technol. (Med. Sci. Technol.)*, 1988, 11, 10, 1000-1002

For the purpose of the study, 20 sheep were subjected to CPB in sheep (weight 40 kg) under anesthesia and assessment of various hematological and physiological parameters. With proper preoperative care and of paramount importance.

More than 30 CPB procedures were conducted in our laboratory and reports, brief description of above parameters mentioned including hematological

and physiological parameters. Various authors have reported the possibility of performing CPB in sheep. However, the present study is the first to report the results of CPB in sheep. The study was conducted in our laboratory and reports, brief description of above parameters mentioned including hematological and physiological parameters. Various authors have reported the possibility of performing CPB in sheep. However, the present study is the first to report the results of CPB in sheep.

SESSION IX

Perioperative management of sheep in cardiopulmonary bypass (CPB) for ex-vivo evaluation of bubble oxygenator (soft shell)

E. Arhar, G. Shaked, S. G. Yehudatzen and M. S. Villalón

See *Chin. J. Foreign Med. Sci. Technol. (Med. Sci. Technol.)*, 1988, 11, 10, 1003-1005

The study was conducted in sheep in a preoperative period of 24 hours to ensure and give to sheep a stable hemodynamic system. The study was conducted in sheep in a preoperative period of 24 hours to ensure and give to sheep a stable hemodynamic system. The study was conducted in sheep in a preoperative period of 24 hours to ensure and give to sheep a stable hemodynamic system.

Twenty-two CPB procedures were

conducted in our laboratory and reports, brief description of above parameters mentioned including hematological and physiological parameters. Various authors have reported the possibility of performing CPB in sheep. However, the present study is the first to report the results of CPB in sheep.

Continuous Epidural Anesthesia in Bovines

J. S. Baker, K. L. Smith and M. H. Meyer

Small Animal Clinical Service

Continuous epidural anesthesia was used in 101 cases in 107 bovine patients. The most common indications were for the control of pain in the lower limbs and perineal area. The duration of anesthesia ranged from 15 to 120 minutes. The most common side effects were hypotension and bradycardia. The mortality rate was 0.5%.

The duration of anesthesia ranged from 15 to 120 minutes. The most common side effects were hypotension and bradycardia. The mortality rate was 0.5%.

SESSION IX

J. S. Baker, K. L. Smith and M. H. Meyer

Small Animal Clinical Service

The study included 101 cases in 107 bovine patients. The most common indications were for the control of pain in the lower limbs and perineal area. The duration of anesthesia ranged from 15 to 120 minutes. The most common side effects were hypotension and bradycardia. The mortality rate was 0.5%.

The duration of anesthesia ranged from 15 to 120 minutes. The most common side effects were hypotension and bradycardia. The mortality rate was 0.5%.

The difference in duration of anesthesia between 15 and 30 minutes was statistically significant, whereas the difference between 30 and 45 minutes was not statistically significant.

Importance of preconditions and preoperative care of sheep prior to cardiopulmonary bypass (cpb)

Bhaskara Rao, Meera Mohanthy, G. Arthur and Vijayan Lal

Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivendram

For the successful outcome of CPB in sheep (ovis aries) preconditioning and assessment of various haematological and physiological parameters with proper preoperative care are of paramount importance.

More than 33 CPB procedures were conducted in our laboratory and reports, brief description of above parameters monitored including donor animal

blood collection and blood banking. Moreover the importance of prophylactic treatments of animals with oxytetracycline to rule out the possibility of latent forms of Anaplasmosis flaring up when the animals were put to severe stress like repeated blood collection and using the blood for CPB. A brief description of preoperative preparation of sheep prior to CPB is also documented in this paper.

□

Perioperative management of sheep in cardiopulmonary bypass (cpb) for ex-vivo evaluation of bubble oxygenator (soft shell)

G. Arthur, Vijayan Lal, V. S Venkatesan and M. S. Viliathan

Sree Chitra Tirunal Institute for Medical Sciences & Technology, Trivendram

The domestic sheep (ovis aries) is a gregarious animal docile in nature and easy to care for: it has an ideal haemodynamic system resembling that of man and long life expectancy. The use of sheep in biomedical research is well established and hence we preferred this animal model for ex-vivo evaluation of soft shell bubble oxygenator.

Twentytwo CPB procedures were

conducted in our laboratory and out of which 22 were evaluated for the performance of the "Chitra" soft shell oxygenator. The brief description of perioperative management of anaesthesia, operative results and values for haematological and biochemical parameters are documented in this paper. This report also briefs the results of successfully evaluated indigenous soft shell bubble oxygenator which is now undergoing clinical trials.

□

' Alveolar - arterial oxygen gradient in bovines in health and sedation '

K. K. Mirakhur A. K. Khanna and Rama Kumar V.

Department of Surgery & Radiology

College of Veterinary Science, Punjab Agricultural University Ludhiana - 141 004

Blood from auricular artery of nine clinically healthy bullock was analysed for oxygen and carbon dioxide tensions. Inspired gas oxygen tension and alveolar gas carbon dioxide tension were calculated on the basis of atmospheric pressure and water vapour pressure and normal values

established. For sedation studies, 6 calves were sedated with diazepam to effect (mean dose 0.4 mg/kg) and alveolar arterial oxygen gradient calculated. The correlation between arterial hypoxaemia and alveolar arterial oxygen gradient is discussed.

□

Laporohysterotomy in a bitch under Acupuncture anaesthesia.

R. Sureshkumar Archibald David and Godfrey David

Department of Surgery, Madras Veterinary College, Madras - 600 007

A brown non descirpt about 3 years was presented at the small animal clinic madras veterinary college hospital, madras on 20.1.1984 with a history of difficulty in whelping. Clinical examination revealed that the vaginal passage was narrow. The animal was debilitated caesarean section under acupuncture anaesthesia was decided. The acu points chosen were GB-34, ST-36, and SP-6. Fluids were administered parenterally after tranuqilization with

Triflupromazine the needles were introduced and stimulated using an acupuncture-oscope. After the acupuncture anaesthesia had set in, laporohysterotomy was performed on the midlind. Four live fetuses were delivered. The linia alba surgical wound was closed as per standard technique and bandaged. parenteral antibiotics were administered and the animal recovered without any complication.

□

Significance of rural clinical education in surgery.

S. S. Misra and S. J. Angelo

*College of Veterinary Science and Animal Husbandry
C. S. A. University of Agri. & Tech, Mathura Campus,*

The results of operative surgery should not be deemed to have been delivered till the restoration of normalcy or wear normalcy of the operated patient. It should be explicit in items of restoration of its productive performance. In exceptional cases, however, surgery may be of significance in experimentation for paving the way to further improvements.

To achieve an ideal result in an operated patient or for that matter minimise complications postsurgically, an extensive room and necessity for clinical education of rural masses around us as surgeons and clinicians is existing

In a period of more than a decade this important facet has been investigated

thoroughly and it has been found that this could well be achieved by disseminating lab/or operation theatre research to the farming community by attractive, illustrated and easy to understand media such as handbills, folders and occasional demonstrations. It is mandatory to enlighten them as to how maladies such as TRP, urolithiasis, uterovaginal prolapse, pelvic, tibial fractures, hom cancer, oculoopathies and a number of other conditions can be minimised besides emphasising the need of abstaining from adopting the so called quackery methods in conditions like uterovaginal prolapse, congenital condition in new born animal to strengthen the hands of surgeon/clinician for the benefit of livestock owned by them.



Clinical applications of providone iodine (Betadine) as surgical antiseptic in veterinary practice.

V. V. Ranade H. V. Jahagirdar and S. M. Karandikar

*Department of Pharmacology, Bombay Veterinary College, Parel, Bombay 400012
Department of Pharmacology, Seth G. S. Medical College, Bombay 12*

BETADINE 5 %, a Providone Iodine Solution contains 0.5 % active iodine for antiseptic action which is slowly released. It is claimed to possess broad spectrum of antimicrobial activity. It is a non-toxic,

non-irritant and non-staining form of Iodine. There are many clinical situations where a safe and efficient antiseptic is a need of today's Veterinary practice.

Cavernous Sinus Venography in the Goats.

S. K. Chawla, A. P. Singh, D. N. Sharma and I. S. Chandna

Depart of Surgery & Radiology, Hariyana Agricultural University, Hissar-125004.

Cavernous sinus venography was done in six goats by injecting sodium iothalate (70% W/V) directly into the angularis oculi vein following its uni- or bilateral catheterization. Ten ml of contrast medium injected each side

was found adequate for visualization of all the sinuses and veins. The technique helped in the radiographic visualization of the veins of the orbit and the ventral cranial sinuses and veins.

Contrast Radiography of Alimentary tract in calves

I. S. Chandna, P. K. Peshin, S. K. Chawla, A. P. Singh and Jit Singh

Department of Surgery & Radiology, College of Veterinary Science, Agricultural Hariyana, University Hissar-125004

Contrast radiography of the alimentary tract was done in five young calves, aged 3 to 5 months, or oral administration of barium sulphate (70% W/V) at the dose rate of 20 to 25 ml/kg body weight. Observation revealed that a period of 20 to 24 hrs was generally required to visualize different parts of the gastrointestinal

tract. The rumen, reticulum, omasum, abomasum and the caecum were clearly demonstrated between 3 to 6 hrs. However complete course, of small intestine was not seen in any radiograph. Lateral recumbent view was considered adequate for the demonstration of different parts of the alimentary tract.

Extensive and diverse applications of Providone iodine (Betadine) solution were studied for its safety and therapeutic efficacy both clinically and experimentally. In surgery it was used for application at the operation site (pre-operatively and postoperatively), washing or irrigation of the viscera and peritoneal cavity, instant sterilization of surgical equipments such as teat surgical instruments etc. In gynaecological procedures such as dystokia, retained placenta and vaginal and uterine prolapse, Betadine

solution was extensively used. In vitro activity of Betadine against Brucella organisms is reported.

In experimental pharmacology, Betadine was used for rinsing the perforated table tennis balls prior to subcutaneous implantation in goats for collection of interstitial fluid. The postoperative complications in the form of infections were not seen. The wound healing was very satisfactory. □

Animal model studies for vascular affection in cattle & dogs

Prof. A. K. Bhargava M. S. Ph. D

*Division of Experimental Medicine & Surgery
Indian Veterinary Research Instt. Izatnagar.*

Large number of vascular affections have been reported in clinical cases. Arterial embolism, venous stasis, atherosclerosis, aneurysm are few which are not associated with common traumatic factors. In the present study two trials were conducted to see if animal model can justify the theories of gangrenous tail due to arterial embolism; and ascites from venous occlusion.

Occlusive tail gangrene:

In first trials three cow calves and three adult cows were subjected to ligation of occygeal arteries at the ventral aspect of Cy 6-7. Follow up evaluation up to three months failed to establish tissue changes of vascular occlusion. The trials do suggest that reestablishment of collaterals are instantaneous and there can be other cumulative factors which predispose gangrene of tail, other than vascular occlusion alone.

Ascites-venous occlusion:

Ascites has been accounted due to cirrhosis of liver which leads to passive congestion and diffusion of plasma in peritoneal cavity. In three dogs hepatic portal vein was ligated following mid ventral laparotomy. It was observed that complete ligation of portal vein leads to severe passive congestion and luminal hemorrhage. The dogs even failed to recover from anesthesia.

Portal caval shunt was tried in experimental two dogs and clinical case of ascites. The animals will tolerate the vascular shunt. In clinical cases the operative procedure leads to prolongation of life without fluid accumulation in peritoneal cavity till 6 weeks. Experiment dogs were maintained till 9 months failed to reveal any hepatic and renal changes. Preliminary trials indicate that portal canal shunts can be undertaken without endangering the life of animal. □

Radiographic Significance in the disposition of fabellae in the stifle lameness in dogs.

S. S. Misra and S. J. Angelo

College of Veterinary Science , Animal Husbandry, C. S. A. University of Agri. & Tech, Mathura.

Fabellae are three small sesamoid bones in the region of the stifle joint. Two of these are located in the heads of the muscle gastrocnemius caudal to the stifle joint on the medial and lateral femoral condyles; the third is located intercalatedly in the tendon of muscle popliteus. The fabella in the lateral part of the origin of muscle gastrocnemius is the largest. Trauma to the most heavily worked stifle joint particularly in the large and sporting breeds of dog viz., Great-dane, Alsatian and Labradors is quite frequent. The locomotory impediment in such conditions is largely

attributable to the pathological changes in the major joint component. On cursory radiographic examination, the exact location of the seat of pathogenesis may invariably be ignored.

In two cases, the dogs suffered from insidious type of stifle lameness; the diagnosis of luxation of the fabellae was, however, confirmed on scrupulous radiographic examination in four views. The condition was there after treated with conventional physico-therapeutic methods, but was known to record recovery pretty slowly.

