



EDITOR :

Dr. A.K. Datta

M.Sc., Ph.D., D.M.L.T.(JU)
Head, Regulatory Affairs
Intervet India Pvt. Ltd.

PATRON :

Dr. Hervé Laberthe

Managing Director
Intervet India Pvt. Ltd.

EDITORIAL BOARD :

Dr. P. D. Sardeshpande

M.V.Sc. Ph.D., F.R.V.C.S.
Dean (Retd.)
Bombay Veterinary College

Dr. S. R. Pattabiraman

M.V.Sc., Ph.D.
Professor & Head (Retd.)
Obsteritics & Gynaecology
Madras Veterinary College

Dr. L. M. Chobe

B.V.Sc. & A.H.
Vice-president & B.U. Head
Intervet India Pvt. Ltd.

Dr. K. R. Krishnan

M.V.Sc., Ph. D.
Professor & Head (Retd.)
Veterinary University,
Training & Research Centre,
TANUVAS, Madurai, Tamil Nadu.

"What the mind can conceive and believe, the mind can achieve"

- W. Clement Stone

*"When I was child, my mother said to me - 'If you become a soldier
you'll be a general. if you become a monk you'll end up as the pope.
Instead, I become a painter and wound up as Picasso."*

- Pablo Picasso

*"The best way to secure future happiness is to be as happy
as is rightfully possible to day"*

- Charles W. Eliot

Preface

Dr. Hervé Laberthe 2
 Veterinary College in India : The G.B. Pant University of Agriculture & Technology, Pantnagar 3

REVIEW ARTICLES :

Current Concept of Ovarian Cyclic Failure in Cattle and Buffaloes

Umed Singh and Inderjeet Singh 5

A Probable Ready Reckoner for Mastitis Treatment

T. Umakanthan 9

CLINICAL ARTICLES :

Ovarian Antral Follicular Activity during different Months of the year in Buffaloes

G. P. Kalmath 11

Evaluation of Berenil® - 7% Vet RTU Against Trypanosomosis in Dogs

D. K. Maske, S.W. Kolte, N.H. Fuke and A.K. Datta 14

Haemato-biochemical Investigations in Canine Demodicosis

G. V. Dhume, D. B. Sardode, N.P. Dakshinkar and G.B. Shrikhande 16

Mean Survival Period of Broiler Chicks Infected as Embryos by Sub-group 'A' Virus

G. N. Dadhich and P. K. Pani 18

Efficacy of Floxidin® (Enrofloxacin) in the Treatment of Metritis in Cows

M. V. Ingawale, A.G. Sawale and R.L. Dhoble 20

Efficacy of Pre-insemination GnRH on the Conception of Rate in Repeat Breeder Cows

R.R. Shelar, V.L. Deopurkar, S.A. Bakshi, S.R. Chinchkar and S.U. Gulavane 26

CASE REPORTS :

Successful Treatment of Bovine Fetal Mumification with Iliren®

M.K. Awathi and R. P. Tiwari 28

Pseudo-pox in Cow and Man

Mohd. Rashid 23

Treatment of Capped Knee (Hygroma) in a Buffalo

Pawan Kumar 24

Sudden Death in a Cow due to Ventricular Septal Abscess

A. Ghadrnan, B. Mohammadian and R. N. Kohli 30

Clinical Management of Hypo-magnesemia in Claves

J.P. Varshney and Rakesh Ranjan 32

Erratic Migration of *Cysticercus tenuicollis* in Doe

R.R. Momin, H.R. Parsani and D.B. Patil 34

Abscess at Peri-udder Region in a Buffalo and its Surgical Management

S.K. Tiwari and S.K. Yadav 35

Management of Incomplete Cervical Dilation in a Cow

Madhumet Singh, Rajesh Sharma, Karandip Singh, N.K. Vasishta and Pankaj Sood 36

Efficacy of Enrofloxacin (Floxidin®) in Fracture Healing in Sheep

Syed Sajjad Hussain, B.A. Moulvi, Faizullah Peer and M.R. Fazili 38

Cannine Congenital Cataract Extraction with Intra-ocular Lens Implantation Surgery in a Pup

R.M. Mahajan 40

Peritoneal Dialysis in Case of Acute Tubular Necrosis in a Dog

R.M. Mahajan 44

OTHERS :

News & Abstracts 43

Readers' Column : Comments / Suggestions 49

PREFACE



Dr. Hervé Laberthe
Managing Director
Intervet India Pvt. Ltd.

Dear Readers,

At the outset, I would like to share my happiness with you, as *'The Blue Cross Book'* has been enlisted under CAB International (CABI), The UK. CABI aims to cover all the globally published literatures. Now abstracts of *'The Blue Cross Book'* can easily be available from the database of CABI (www.cabi.org).

Thanks to Editorial Board Members and thanks to all the Readers for their immense support and suggestions, which has helped this journal to become CABI database standard.

I would like to mention here, a part of the CABI's appreciation letter :

Quote –

"We have reviewed internally applying stringent selection criteria based on potential yield, scientific value and geographic origin. We found the subject area of the journal to be very relevant to our areas of interest and the content to be novel and important. We would, therefore, like to pursue with you the possibility of obtaining regular complimentary copies of the above title(s)".

A special vote of thanks also to all the contributors without which this may not have been possible.

I hope you will like this 19th Edition of *'The Blue Cross Book'*. We request you to send us your comments and suggestions as usual.

Please note that *'The Blue Cross Book'* office has been shifted to Pune. I would request to send your technical articles to :

Dr. A.K. Datta,

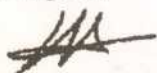
Editor, *'The Blue Cross Book'*,

Intervet India Pvt. Ltd.,

Briahnagar, Off Pune-Nagar Road,

Wagholi-412 207, Dist. - Pune, India.

Best Regards,

A handwritten signature in black ink, appearing to be 'H. Laberthe', written over a horizontal line.

Dr. Hervé Laberthe



THE VETERINARY COLLEGE IN INDIA

THE G.B. PANT UNIVERSITY OF AGRICULTURE & TECHNOLOGY, PANTNAGAR

The College of Veterinary Sciences at Pantnagar was established in the year 1960 and was named as College of Veterinary Medicine with all its disciplines organized into the following four departments:

1. Anatomy & Histology
2. Physiology & Pharmacology
3. Pathology & Hygienes
4. Medicine & Surgery.

With its immense responsibilities of socio-economic transformation at local and national level, the college marched ahead over the bedrock of the following mandates.

1. To impart under-graduate and post-graduate education for providing competent veterinarians.
2. To conduct basis and applied research on various aspects of livestock health, production and livestock products technology.
3. To carry out veterinary and animal husbandry extension activities through farm advisory services, health care services, organizing animal welfare camps and cattle/dog/poultry shows and to educate farmers and professionals for providing better management and production techniques for improving animal health and production.
4. To provide expert advice in the area of animal health including diagnostic services.

Education :

With the implementation of the recommendations of the Veterinary Council of

India (VCI) for the minimum standards of education for B.V.Sc. & AH degree programme in 1994, the entire curriculum was revised and updated.

With a view to instil a competitive spirit in teaching-learning process, "Best Teacher" and "Best Student" awards have been instituted every year of five year degree programme. Besides B.V.Sc & AH degree programme, the college offers courses for M.V.Sc. degree in 19 subjects and Ph.D. degree in 16 subjects of various disciplines of animal health and production.

Research :

The college has always been in the fore front in solving the problems of the livestock sector. Various need based areas in research have been identified to boost the animal health and production. Every staff member of the rank of Associate Professor and above has at least one outside funded research project. Currently 45 outside funded projects from ICAR, NATP, UPCAR, DST, DBT etc. are in operation besides the University funded projects.

Extension :

The college has firm belief in the philosophy of national prosperity through rural upliftment. It strives hard for the prompt transfer of cost-effective, eco-friendly and simplified technologies to the farmers of various aspects of animal health and production. animal welfare camps, livestock farmers (*Ghosthi*), at least once in a month are organized in rural areas.

Veterinary Teaching Hospital :

The clinical services are being provided by various clinical units namely canine, bovine, caprine and equine units. Besides providing diagnostic, therapeutic and prophylactic facilities to the livestock owners, it also offers practical clinical training to the under-graduate and post-graduate students. The clinic operates round the clock. It also offers indoor facilities for small and large animals with a provision for comfortable stay of the animal owners. Specialized services like ultrasound, x-ray facility, critical/intensive care of emergency patients, bio-chemical analysis of blood, urine; CSF etc. are provided for effective and efficient diagnosis and treatment. Two ambulatory clinical vans with clinicians and students regularly visit the villages to provide the veterinary services at the farmer's door steps.

College Library :

Besides a large central library at the University level, the college has its own library, stocking latest books, journals, magazines of veterinary and general interest. This offers easy and quick access to the relevant literature and better utilization of the leisure time. CD-ROM facility is also available in the college library

Computer Laboratory/ARIS cell :

Computer education is a compulsory. A computer laboratory equipped with modern computers is in operation in the college to impart basic knowledge on computer application to the under-graduate and post-graduate students.

Equestrian Club :

With a view to impart training on equine management and horse-riding, Equestrian club has been established. The club is registered with the Equestrian Federation of India (Regd.

No C-156). Equestrian training is being provided by the expert, ex-army riding instructor

Blue Cross Society :

This society has been established in the college with an aim to mould the public opinion towards animals welfare and to develop compassion, affection and care towards animals. The main objectives of the society include education and enlightenment of the people about ways of animal management and prevention of cruelty against them.

Students Personality Development :

Besides imparting professional education, the college is sensitive to all-round personality development of the students. Extra-curricular activities under various groups including professional competitions, personality development and career opportunities, literary, cultural activities, prevention of cruelty to animals, games and sports etc. are regularly organized. A continuing programme or extra-mural lectures by leading entrepreneurs, scientists on various topics of general and academic interest are routinely arranged.

'Earn-While-You-Learn' Project :

In order to supplement the income of the students and to train them on practical aspects of animal health and production the programmes like practical poultry keeping, pig keeping, goat and pet keeping have been initiated. This undoubtedly helps them in earning to partially meet their expenditure besides providing them with confidence and practical experience on various aspects of production, disease control, management and marketing.

Data Courtesy :

Dr. G. K. Singh

Prof. & Head, Anatomy, G. B. Pant University of Agriculture & Technology.

Current Concept of Ovarian Cyclic Failure in Cattle and Buffaloes - A Review

Umed Singh and Inderjeet Singh*

CCS Haryana Agricultural University, Hissar - 125 004

Abstract :

Cyclicity failure is the most costly problem in cattle and buffaloes, because of high incidence and resulting losses. Ovarian cyclicity failure can be of pre-service or post-service. Pre-service cyclicity failure includes females with absence of observed estrus in the immediate post-partum period and also heifers (delayed puberty), whereas the post-service cyclicity failure is the absence of observed estrus following and unsuccessful insemination / mating. The possible underlying reasons for cyclicity failure could be physio-pathological in origin or they may be due to management inadequacies. Former category includes lactation, suckling, nutrition, infections, hormonal imbalances, parity and breed of animal. The most important cause of anestrus due to management is inadequate estrus detection.

Introduction :

In relation to ovarian function, cyclicity failure can be divided into various categories such as functional ovaries with undetected estrus (sub-estrus), ovaries with persistent corpus luteum (CL) with or without uterine pathology, ovaries containing a CL in pregnancy and non-functional ovaries (true anestrus). This paper aims to review various methods of inducing synchronized estrus in cattle and buffaloes, and their advantages and disadvantages will also be discussed.

In cycling animals, clinical experience strongly suggests that inadequate observation is the most important single cause of reported cyclicity failure, both at the organized farms

as well as under the field conditions. Genital examination of many anestrus animals has frequently revealed recent estrus and ovulation. In a study conducted at an organised buffalo farm, Yash Pal (2000), on the basis of whole milk progesterone, observed that 75% of the 30-60 days post-partum buffaloes showed luteal concentrations of progesterone but only a small proportion of these were actually detected in estrus by the routine farm estrus detection regime. Most common errors and deficiencies of heat detection programmes include inadequate duration and inappropriate time for observation, improper observations and ignorance and negligence of the observer with respect to signs of estrus. These problems can be overcome by improving observation viz. improve the observer and his knowledge of estrus signs, adequate duration of observations, facilitating observations with estrus detection aids and anticipation of next heat by farm records, per-rectal palpation, ultrasonography and synchronization protocols. The anestrus animals with normal genitalia but unobserved cyclicity as well as the true anestrus animals can be synchronized or induced to estrus with hormonal therapy.

The pharmacological control of the cycle is based on two approaches - either shortening the life span of the CL by inducing luteolysis or extending the life of CL or substituting for it by administering progesterone/progestogens (Odde, 1990). Ovarian cyclicity has been induced in 90 post-synchronized in cattle with progestogens, prostaglandins, progesterone-estrogen, progesterone-prostaglandin combinations.

* Central Institute for Research on Buffaloes, Sirsa Road, Hisar-125 001

Progestogens :

To synchronize estrus successfully, Christian & Casida (1948) administered progesterone in daily injections. Since this early work, prolonging the luteal phase with progestogens has been the subject of extensive study and they have been administered by a variety of routes viz. daily injections, oral feeding, pessaries/sponges, PRID and ear implants. (Wiltbank *et al.*, 1965, Roche, 1974, Sreenan & Mulvehill, 1975, Roche, 1976, Smith *et al.*, 1984, Zimbelman & Smith, 1966 a)

Progesterone blocks ovulation and suppresses estrus. Exogenous administration of progestogen for sufficient period allows natural regression of CL present in treated animal and prevents the release of gonadotrophins from the anterior pituitary. When the treatment is withdrawn, there is a bolus release of gonadotrophins sufficient to induce follicular development, estrus and ovulation.

Daily i.m. or s.c. injection is a tedious process, so it was replaced by oral administration of synthetic progestogen added to feed. But problems associated with uniform intake lead to development of pessaries and sponges, but retention of sponge / pessaries was again a problem. Subsequently, stainless steel spirals coated with silicon rubber, the PRID, were developed but with variable fertility at induced estrus. Long term administration of progestogen and been associated with lower fertility but the mechanism responsible for reduced fertility is not well established though flowering factors have been suggested (Wishart & Young, 1974, Hawk, 1971 and Lamond, *et al.*, 1971)

Progestogen + Estrogen :

Since treatment with progestogen for longer period (≥ 12 days) was reported to reduce conception (Roche, 1976). Short-term progestogen system was developed by

incorporating agent like estrogen with progestogens. For this progestogens were administered in the form of sub-cutaneous implants synchromate - B (SMB) and **Crestar**[®] (Intervet) are the common types of implants widely used. SMB uses an ear implant containing 6mg norgestomet combined with an i.m. injection of 5mg estradiol valerate and 3mg norgestomet while **Crestar**[®] uses the same regimen except that the ear implant contains only 3mg norgestomet. The implants were inserted sub-cutaneously on the dorsal side of the ear with applicator and were kept *in-situ* 9 - 10 days. At the time of removal, the treated animals were also injected with 500 i.u. eCG i.m., which may increase the percentage of cows showing estrus (Smith & Kaltenbach, 1990). Treatment with ear implants has been reported to result in high percentage (90%) of anestrus females showing estrus and with a >50% first service conception rate (Miksch, *et al.*, 1978, Singh, *et al.*, 1998). Luteal dysfunction due to insufficient LH production following implant removal has been associated with reduced fertility (Favero, *et al.*, 1988).

Progestogen + PGF 2 α

Instead of administering estrogen at the beginning of a progestogen treatment to reduce the length of progestogen exposure, a prostaglandin may be administered at or near the end of treatment. Using this method, better estrus response and synchrony have been reported (Beal, 1983, Smith, *et al.*, 1984.

Oral Progestogen + PGF 2 α

Malengesterol acetate (MGA), an orally active progestational steroid is capable of promoting endometrial proliferation and maintenance of pregnancy (Duccan, *et al.*, 1964 and Zimbelman & Smith, 1966a). Minimal effective doses of MGA required for complete maintenance of pregnancy (4mg / day) were 8 to 20 times greater than those needed to inhibit ovulation occurred when

daily intake was about 0.5mg MGA per cow (Zimbelman & Smith, 1966a). The minimal effective dose to inhibit ovulation in most cattle was 0.42 mg (Zimbelman & Smith, 1996b). MGA, when fed daily for 14-18 days at levels of 0.5 to 1.0 mg, has been shown to effectively synchronize estrus in cattle by inhibiting ovulatory surge of LH (Zimbelman & Smith, 1966a). The advantages of MGA in estrus synchronization include ease of administration and low cost relative to other estrus synchronization agents. However, synchronized estrus following MGA treatment is subfertile (Roche & Crowley, 1973). To overcome the problem of reduced fertility, Brown, *et al.*, (1988) developed a system in which MGA feeding. Therefore, the animals enter the later stages of estrous cycle when PGF 2 α is administered. Utilizing this system, King, *et al.*, (1988) synchronized beef cows with a 14-d norgestomet implant followed by PGF 2 α injection, 16 days after implant removal and reported higher estrus response, better degree of synchronization and increased conception rates. Later on, Yelich, *et al.*, (1995) synchronized beef cattle with 0.5 mg MGA in feed daily for 14 days, followed by 25 mg PGF 2 α for 17days after MGA withdrawal, and reported a 65% estrus response with 69% synchronized conception rate.

Management of Summer Acyclicity in Buffaloes :

Buffalo reproduction is hampered due to the problem of delayed puberty, silent estrus, long postpartum ovarian inactivity and on the whole, poor fertility. Other problems associated with buffalo reproduction are non-availability of good bulls and seasonality of reproduction; certain months of the year (October to January) are more favorable for breeding (Gangwar, 1980). This problem of seasonality results into long inter-calving period (Bhalla *et al.*, 1967). In addition, the signs of estrus are less intense in buffaloes than cattle and moreover, behavioural signs of estrus are weak during summer (Agarwal & Purbey, 1983). Attempts

have been made to induce cyclicity in summer anestrus buffaloes with various regimens of progestogens, but with variable results. (Rao & Rao, 1983, Singh *et al.*, 1984, Kundu, 1998 and Rajesh, 1999). Reproductive end results will depend upon the synchronization programme, the animal (nutritional status, genotype), estrus detection ability, cost of synchronization programme and ease of application. Development of norgestomet ear implants and their availability have facilitated use of A.I. in cattle and have been helpful in increasing pregnancy rates to fixed time inseminations. Recent development in progestogen-PGF 2 α combination may result in additional useful synchronization programs. Finally, research is needed to identify pre-pubertal heifers that would best respond to progestogens with a fertile estrus and establishment of phasic patterns of LH release following exogenous progesterone.

References :

- Aggarwal, S.K. and Purbey, L.N. (1983). *Ind Vet. J.*, **60** (8) : 631.
- Beal, W.E. (1983). *Anim. Prod.*, **37** : 305.
- Bhalla, R.C; Senger, D.P.S. and Soni, B.K. (1967). *Ind J. Dairy Sci.*, **20** : 189.
- Brown, L.N; Odde, K.G.; King, M.E; LeFever, D.E. and Neubauer, C.J. (1988). *Theriogenology*, **30**:1.
- Christian, R.E. and Casida, L.E. (1948). *J. Anim. Sci.*, (Supp.1) : 383
- Duncan, G.W.; Lyster, S.C.; Hendrix, J.W.; Clark, J.J. and Webster, D. (1964). *Fertil. Steril.*, **15** : 419.
- Favero, R.J.; Faulkner, D.B. and Kesler, D.J. (1988). *Theriogenology*, **29**; 245.
- Gangwar, P.C. (1980). *Ind. J. Dairy Sci.*, **33**:4
- Hawk, H.W. (1971). *J. Anim. Sci.*, **32**: 225
- King, M.E.; Odde, K.G.; Holland, M.D.; Mauck, H.S. and LeFever, D.G. (1988). *Theriogenology*, **30** : 785.

- Kundu, A.S. (1998). Management of summer anestrus in postpartum buffaloes with norestomet-estradiol-eCG combination. M.V.Sc. thesis, CCS Haryana Agricultural University, Hisar.
- Lamond, D.R.; Dickey, J.F.; Henricks, D.M.; Hill, J.R. and Leland, T.M. (1971). *J. Anim. Sci.*, **33** : 77
- Miksch, E.D.; LeFever, D.G.; Mukembo, G.; Sptizer, J.C. and Wiltbank, J.N. (1978). *Theriogenology*, **10** : 21.
- Odde, K.G. (1990). *J. Anim. Sci.*, **68** : 817-830.
- Rajesh Kumar (1999). Fertility responses of anestrus postpartum buffaloes to progesterone therapy during low breeding season. M.V.Sc. thesis, CCS Haryana Agricultural University, Hisar.
- Rao, A.R. and Rao, C.H.C. (1983). *Vet. Rec.*, **113**:623.
- Roche, J.r. (1974). *J. Reprod. Fertil.*, **4**:433.
- Roche, J.R. (1976). *J. Anim. Sci.*, **43** : 164.
- Roche, J.F. and Crowley, J.P. (1973). *J. Reprod. Fertil.*, **35**:211.
- Singh, G.; Singh, G.B.; Sharma, R.D. and Nanda, A.S. (1984). *Theriogenology*, **21**:859.
- Singh, U.; Khurana, N.K. and Inderjeet (1998). *Theriogenology*, **50** : 1191.
- Smith, J.F. and Kaltenbach, C.C. (1990). *N.Z. agric., Res.*, **33** : 449.
- Smith, R.D.; Pomernatz, A.J.; Beal, W.E.; McCaznn, J.P.; Pibeam, T.E. and Hansel, W. (1984). *J. Anim. Sci.*, **58** : 792.
- Sreenan, J.M. and Mulvehill, P. (1975). *J. Reprod. Fertil.*, **45** : 367.
- Wiltbank, J.N.; Zimmerman, D.R.; Ingalls, J.E. and Rowden, W.W. (1965). *J. Anim. Sci.*, **24** : 990.
- Wishat, D.F. and Youg, I.M. (1974). *Vet. Rec.*, **95** : 503.
- M.V.Sc. Thesis, C.C.S. Haryana Agricultural University, Hisar. Yesh Pal (2000). Ovarian function and estrus induction in postpartum buffaloes.
- Yelich, J.V.; Mauck, H.S.; Holland, M.D. and Odde, K.G. (1995). *Theriogenology*, **43** : 389-400.
- Zimbelman, R.G. (1963). *J. Anim. Sci.*, **22** : 1051.
- Zimbelman, R.G. and Smith, L.W. (1966a). *J. Reprod. Fertil.*, (**Suppl. 1**) : 185.
- Zimbelman, R.G. and Smith, L.W. (1966b). *J. Reprod. Fertil.*, (**Suppl. I**) : 193.

"He is born to no purpose who, having the rare previlage of being born a man, is unable to realize in this life"

- Sri Ramakrishna Paramhansa

A Probable Ready Reckoner for Mastitis Treatment

T. Umakanthan

Veterinary Dispensary , P.O. Chinnamanur, Theni -625 515, TN

The deciding factor in the field for a successful mastitis therapy is the immediate selection of appropriate antibiotics. The climate, lactation, parturition stage, type of mastitis and pathogen present also influence the appropriate antibiotics. The climate, lactation, parturition stage, type of mastitis and pathogen present also influence the appropriate antibiotic selection the results of Bacterial culture and Antibiotic sensitive tests are no way helpful for immediate therapy with suitable antibiotics especially in peracute and acute mastitis cases, Hence, a review of various studies (Umakanthan *et al.*, 1996, Umakanthan, 1997a, Umakanthan, 1997b and Umakanthan 1998) under taken to prepare a probable ready reckoner for immediate treatment.

The present article deals mostly with recent antibiotics, were used because of prevalence of resistance total additional antibiotics. Examples of per acute, chronic and mild form of mastitis affected cows were cited. The cows with fibred udder were not used. Antibiotics were infused aseptically into the affected quarters after emptying the quarter second treatment given after 24hours of first. Number of treatments required were one or two. Diclofenac sodium 250 – 375mg. given intramuscularly to cows with per-acute and acute mastitis. Antibiotics doses varied with severity and nature of mastitis. For severe per-acute mastitis Hynidase and Beta methasone sodium

2mg mixed with the antibiotics was administered. bacterial culture and antibiotic sensitivity tests were done at different laboratories for more accuracy. Basically the antibiotics, selected and used, were based on the experience gained from the observation of symptoms, nature of mastitis and milk, pathogens present and climate. The studies were done in different places of Tamilnadu state.

Fitment may be done on the reckoner as per the existing climate, month, type of mastitis and parturition stage of the cow. Bacterial culture and antibiotic sensitivity tests may be later confirmed.

Acknowledgement :

The author thanks the Director, Veterinary Services, Tamilnadu for the facility provided and all the clients, Veterinarians , veterinary students, pharmaceuticals staffs and clinical laboratory technicians who cooperated in this study,

References:

- Umakanthan, T. Kaniyappan. M and Soundarajan .K. (1996), *Ind. Vet. J.*, **73** : 788.
- Umakanthan, T. (1997a), *Ind. Vet. J.*, **74** : 70.
- Umakanthan, T. (1997b), *Ind. Vet. J.*, **74** : 698.
- Umakanthan, T. (1998), *Ind. Vet. J.*, **75** : 732.

Table : Probable Ready Reconer for Mastitis Treatment

Sl. No.	Climate	Type of Mastitis	Number of cows used	Antibiotics distilled water used plus sterile in parathesis	Result percent	Culture Test results	Remark
1.	Spring and winter	All	18	Cefactor 250 mg (5 ml)	66	<i>Streptococcus</i> sp., <i>Klebsiella</i> sp. and <i>Staphylococcus</i> sp.	
2.	All Seasons	Per-acute and Acute	20	Ceftriaxone 250mg or 500mg (5 ml)	95	<i>Staphylococcus aureus</i> Non-Haemolytic <i>Streptococcus</i> sp. and <i>Coliform bacilli</i> .	Best in March and April
3.	All Seasons	All	15	Sparfloxacin 200mg (5 ml)	70	<i>Coliform</i> and <i>Streptococcus</i> sp.	
4.	All Seasons	All	52	Cefataxin 250mg to 1g (4ml) plus Hynidase+Beta methasone sodium (2mg)	96	<i>Staphyl Laccoccus aureus</i> , <i>Streptococcus</i> sp. <i>Pseudomonas auruginosa</i> , <i>Klebsiella</i> sp. and <i>Bacillus</i> sp.	A best drug for all seasons especially, for severe and per-acute mastitis which occurs in just nearing or soon after parturition of cows
5.	All Seasons	Mild Form	108	Pendistrin SH (6ml) +Metronidazole gel (100mg)	93	<i>Staphylococcus</i> sp.	Best for all types of mild form of mastitis
6.	Spring and Winter	Mild Form	64	Tobramycin Sulphate 80mg (2ml)	94	<i>Klebsiella</i> sp., <i>Staphylococcus</i> sp. Gram+ve rods and <i>Escherichia coli</i>	Best for all types of mild form of mastitis
7.	Mid Summer	Per-acute	14	Cefaperazone sodium 500mg (5ml) and Hynidase+Beta-methasone sodium (2mg)	100 (in 15 to 84 hrs)	<i>Staphylococcus aureus</i>	The only best drug from May second week to end of the month
8.	All Seasons but more in rainy and cold season	Mild form without inflammation but milk yellowish in colour and blood stained	10	Streptomycin 2 g (6ml) for three days (morning and evening)	90	<i>Leptospira</i> sp.	Usually Parenteral also administered

Ovarian Antral Follicular Activity during Different Months of the Year in Buffaloes

G.P. Kalmath

Department of Veterinary Physiology, Veterinary College, Bangalore -24, Karnataka

Abstract :

The reproductive activity of buffaloes was assessed by studying the follicular population on the surface of the ovaries collected from the civil slaughter house, Bangalore, during December, 1998 to August, 1999. The total number of follicles observed on the surface of the ovary, number of medium and large sized follicles showed significant ($p < 0.05$) variation with the ambient temperature. The present study showed that, there were significantly more number of medium and large sized follicles in colder months (December and January) and this follicular number, as the months became hotter (March and April), showing least number of total medium and large follicles. These results indicate that the ovarian follicular activity varied significantly with different periods of the year and the ambient temperature seems to have significant influence on ovarian follicular activity in buffaloes.

Introduction :

Even though buffaloes are polyestrous and breed throughout the year, the seasonal calving patterns in buffaloes (Deen & Tanwar, 1988 and Vale *et al.*, 1990) shows variation in their reproductive activity during different periods of the year. Buffaloes that calve in summer or autumn resume their cyclicity earlier than those calving in winter or spring. The decreasing day length may favour the cyclicity (Gordon, 1996). High ambient temperature may contribute to the seasonal pattern of reproduction (Gordon, 1996). She-buffaloes are not active during the hot summer months (Pandey & Razada, 1979). The occurrence of the estrous was highest during December and lowest during May and the period between May and July to be slack season for breeding. The high ambient temperature had suppressive effect on the

breeding activity in buffaloes (Hossain, 1971). The conception rate was low between the months of February and August (Madan & Raina, 1985). Variation in the results of various reports for studies of seasonal variation in the reproductive activity of buffaloes, the present study was designed to assess the ovarian antral follicular activity during different periods of the year.

Material and Methods :

Buffalo ovaries were collected during different months of the year (December, 1998 to August, 1999) to study the effect of temperature on the bio-chemical and ionic profiles of the follicular fluid. Based on rain fall, temperature and humidity, the Department of Meteorology, Government of India, has categorized the seasons as :

December to February - winter months

March to June - summer months

The July and August months were considered to look into the effect of transition from summer activity to winter activity of the ovarian antral follicles.

Collection of Ovaries :

Buffaloes, brought to the local abattoir animals, were apparently healthy, non-pregnant, middle aged and had calved at least once (by looking for the well-grown udder teats). These buffaloes were selected for the collection of ovaries. Buffalo ovaries were collected during the period between December, 1998 and August, 1999. The animals to be slaughtered, were brought from the places in and around Bangalore city, where the climatic conditions remain same. Ovaries were collected immediately after slaughter and evisceration. Ten ovaries were collected in each collection and such collections were repeated thrice a

week.

Following collection, ovaries were washed twice with sterile 0.9% (w/v) NaCl and placed in sterile plastic bag, containing ice cold 0.92% NaCl (w/v) and transported to the laboratory within one hour.

Classification of the Antral Follicles :

The ovarian antral follicles at different stages of development and maturation were classified into three groups on the basis of their diameter (Kulkarni, 1988) as follows :

Group I : small follicles (<6mm)

Group II : medium follicles (6-10mm)

Group III : large follicles (11-16mm)

A hand lens and a scale up to one-millimeter sensitivity were used to measure the surface diameter of the follicles present on the ovaries. The number of follicles, falling in each group was separately noted down. The reproductive activity was assessed by studying the follicular population on the surface of the ovaries. Presence of functional corpus luteum, if any, was also noted. Follicular number was correlated with monthly average mean temperature using regression analysis (Snedecor & Cochran, 1994).

Results and Discussion :

The present study showed that the total number of follicles on the surface of the ovary reduced, as the months became hotter (Table). There were significantly more number of medium and large sized follicles in colder months (December and January), when compared to hotter months (April and June), which is in agreement with the findings in buffaloes (Rajasha, 1999). Same trend was also observed with the number of functional corpora lutea.

The follicular activity (follicle number) during July and August months, when the ambient temperatures were 24.85°C and 24.5°C respectively, was intermediate - indicating the transition from lower activity of summer months to the higher activity in cooler months with fall in the ambient temperature. Same trend was observed with the number of functional corpora lutea.

The number of small follicles did not vary ($p>0.05$) significantly with the different periods of the year. There appears to be follicular turnover irrespective of the time of the year and the estrous cycle activity in buffaloes which is similar to the findings of Ravindra & Rawlings (1997), who have shown that the follicular growth in smaller group was there in

Table: Ovarian Follicular Activity During Different Months of the Year (60 Animals/Month)

Month	Average* mean Temp (°C)	Small Follicles	Medium Follicles	Large Follicles	Total No. Follicles	No. of Functional Corpora Lutea
Dec	21.20	581	217	73	871	61
Jan	20.95	526	187	66	779	57
Feb	22.75	501	190	56	747	53
Mar	25.75	522	161	49	732	43
Apr	27.20	513	133	37	683	31
Jun	25.85	483	146	44	673	31
Jul	24.85	495	163	52	710	32
Aug	24.50	507	188	53	748	38

(* Source of Temperature Data : Department of Agrometeorology, GKVK, UAS, Bangalore)

both breeding and non-breeding seasons, in sheep. This is also in agreement with the report of Spicer & Echterkamp (1986), who observed that follicular activity in smaller group was there even in pre-pubertal cattle.

There were significantly less ($p < 0.05$) number of follicles in medium and large group during hotter months (March and April) than colder months (December and January). This indicated that the follicles entered from small group (basal follicular activity) into the medium and large groups, in accordance with cold or hot months. This is in contrast to the results of Taneja *et al.*, (1995a & 1995b), who had shown that more number of medium and large follicles were available in hotter months than colder months. The difference could be attributed to the nutritional status of the buffaloes and the small sample size.

These results indicate that the ovarian follicular activity varied significantly with different periods of the year and the ambient temperature, seems to have significant influence on ovarian follicular activity in buffaloes. This is in agreement with Madan & Raina (1985) that, there were significantly ($p < 0.05$) more number of buffaloes with corpora lutea in colder months than in hotter months, which again reflected the reproductive activity of the buffaloes in the colder months. These results clearly indicate that the buffaloes are reproductively more active during colder months than in hotter months and there is sufficient evidences to believe that the buffaloes are sensitive to ambient temperature and which is in agreement with the reports of Madan & Raina (1985), Cockrill (1974), Deen & Talwar (1988) and Vale *et al.*, (1990).

References :

- Baruselli, P.S., Mucciolo, R.G., Visintin, J.A., Viana, W.G., Arruda, R.P., Madureira, E.H., Oliveira, C.A. and Molero-Felho, J.R. (1997). *Theriogenology*, **47**: 1531-1547.
- Cockrill, W.R. (1974). Edn. The Husbandry and Health of Domestic Buffalo, Rome, FAO.
- Deen, A. and Talwar, R.K. (1988). *Ind. J. Anim. Reprod.*, **9**: 66-67.
- Hossain, E.A.S.K. (1971). *Bangladesh Vet. J.*, **5**: 47-52.
- Kanai, Y. and Shimizu, H. (1983). *Proceedings of fifth World Conference on Animal Production*. **2**: 215-216.
- Kanchev, L.N., Dubson, H. Ward, W.H. and Fetzpatrick, R.J. (1976). *J. Reprod. Fertility*, **48**: 341-346.
- Madan, M.L. and Raina V.S. (1985). Fertility of buffaloes under tropical conditions. *X International Congress on Reproduction and AI*, Illinois, USA. Vol. II : pp170.
- Pandey, M.D. and Razada, B.C. (1979). *Proceedings of the FAO Seminar on Buffalo Reproduction and AI (Karnal)*, pp234-246.
- Raghava, R.V. Narayan, K. Murthy, G.S. and Ramachandra, S.G. (1997). *Buffalo J.*, **13**: 237-242.
- Rajasha, D. (1999.) "Ovarian Antral Follicular Dynamics in Buffaloes", M.V.sc. Thesis Submitted to the University of Agricultural Sciences, Bangalore.
- Ravindra, J.P. and Narayana, K. (1984). *Mysor. J. Agri. Sci.*, **18**: 143-145.
- Ravindra, J.P. and Rawlings, N.C. (1997). *J. Reprod. Fertility*, **110**: 279-289.
- Snedecor, G.W. and Cochran, W.G. (1968). *Statistical Methods*. 6th Edn., Oxford and IBH Publications, New Delhi.
- Speicer, L.J. and Echterkamp, S.E. (1986). *J. Anim. Sci.*, **62**: 428-451.
- Taneja, M. Totey, S.M. and Ali, A. (1995a). *Theriogenology*, **43**: 451-464.
- Taneja, M. Singh, S. Totey, S.M. and Ali, A. (1995b). *Theriogenology*, **44**: 581-597.
- Vale, W.G., Ohashi, O.M., Sousay, J.S. and Ribeiro, H.F.L. (1990). Studies on the reproduction of water buffalo in the Amazon basin. In *Livestock reproduction in Latin America*. Rao/IAEA Seminar (Bogota), pp.201-210.

Evaluation of Berenil® - 7% Vet RTU Against Trypanosomosis in Dogs

D.K. Maske, S.W. Kolte, N.H. Fuke¹ and A. K. Datta²

Department of Parasitology, Nagpur Veterinary College, Nagpur-440006, MS

Abstract :

Efficacy trial of **Berenil**®-7% vet RTU (diminazene aceturate) was conducted against *Trypanosoma evansi* infection of dogs. The trypanosomocidal action of **Berenil**®-7% vet RTU (Intervet India Pvt. Ltd.), injected at the dose rate of 1 ml per 20 kg body weight, deep intra-muscularly, was observed cent percent cure of naturally occurring *Trypanosoma evansi* infection in dogs in 24 hours of post-treatment. The altered haematological values found normal on the 3rd day of treatment.

Introduction :

Trypanosomiasis in dogs, produced by *Trypanosoma evansi* is a fatal disease, causing high morbidity and possibly mortality (Soulsby, 1982). Pathologically, trypanosomiasis is manifested by oedema, corneal opacity and usually accompanied with important haematological changes. Traditionally, the **Berenil**® powder dissolved in water for injection, has been widely used against trypanosomiasis. **Berenil**® 7% vet RTU (diminazene aceturate), a new formulation (anti-haemoprotzoan agent), produced by Intervet India Pvt. Ltd., has been claimed to be a highly potent compound. Hence, this study is planned to observe efficacy of **Berenil**® 7% vet RTU against clinical trypanosomosis in dogs.

Materials and Methods :

A total of 18 dogs from pet owners, 6 to 24 months of age in Nagpur city, having clinical manifestations viz., elevated temperature,

anaemia, corneal opacity and anorexia, were selected. On examination, the blood smears of infected dogs were identified as *T. evansi*. Some dogs also harboured mixed protozoan infection with *Babesia canis*. The selected dogs were divided into two groups A and B. Group A, consisting of 10 infected dogs, was treated with **Berenil**® 7% vet RTU, at the dose rate of 1ml per 20 kg body weight deep intra-muscularly on the thigh region. Group B, consisting of 8 dogs, was kept as uninfected, untreated control. The efficacy of drug was judged by examining the wet blood smears of dogs at daily intervals, consecutively for three days. Later on, the blood smears were examined at weekly intervals for a period of 30 days to confirm the reinfection of dogs. For haematology, the blood was collected from the dogs in sodium and potassium oxalate anti-coagulant. The haematological parameters viz. haemoglobin (Hb), packed cell volume (PCV), total erythrocyte count (TEC), total differential leucocyte count (TLC), were observed by standard methods (Table). Haematological observations were made before and post-treatment.

Results and Discussion :

In the present investigation, dogs in group A, treated with **Berenil**® 7% vet at the dose level of 1ml per 20 kg body weight deep intra-muscularly did not reveal the occurrence of Trypanosomes in blood smears on the second and third day of treatment. The effect of drug was lasted for 28-30 days, after which against some live parasites were detected in wet-blood

1. Veterinary physician and consultant, Dog Health Clinic, Nagpur.

2. Intervet India Pvt. Ltd., Brihannagar, Off Pune-Nagar Road, Wagholi - 412 207, Dist., - Pune

Table : Blood Values (Mean \pm SE) in Efficacy of Berenil® 7% Vet RTU Against Trypanosomiasis in Dogs.

Components	Healthy Dogs (Control)	Treated Dogs	
		Pre-treatment value	Post-treatment value
Hb (g%)	14.13 \pm 0.06	0.797 \pm 0.17	14.10 \pm 0.04
PCV (%)	43.16 \pm 0.09	32.10 \pm 0.41	43.10 \pm 0.007
TEC (10 ⁶ /cu.mm)	6.50 \pm 0.11	4.38 \pm 0.13	6.59 \pm 0.11
TLC (10 ³ /cu.mm)	13.05 \pm 0.06	20.58 \pm 0.22	12.91 \pm 0.01
Neutrophils (%)	68.35 \pm 0.14	76.16 \pm 0.04	67.95 \pm 0.04
Lymphocytes (%)	22.11 \pm 0.07	14.10 \pm 0.03	21.90 \pm 0.07
Eosinophils (%)	4.33 \pm 0.05	5.82 \pm 0.02	4.36 \pm 0.02
Monocytes (%)	4.35 \pm 0.42	5.05 \pm 0.03	4.40 \pm 0.05

smears. There was noticeable relief in symptoms of elevated temperature, anorexia etc. after 24 hours of post-treatment.

The mean haematological values in treated and healthy dogs are shown in Table. The pre-treatment blood values of Hb, PCV, TLC and lymphocytes decreased in infected dogs, were significantly increased to normal on the 3rd day of treatment. Similarly, pre-treatment increase in TLC, neutrophils, eosinophils and monocytes values of the infected dogs were also reduced to normal post-treatment. This compares with the haematological findings in domestic animals naturally infected with *T. evansi* (Gil, 1991).

There was slight shivering immediately after injection and anorexia after 24 hours of treatment. This reaction was disappeared after administration of injection of

'Avil®' (Intervet India Pvt. Ltd.) at the dose rate of 2ml intra-muscularly per animal.

The efficacy of **Berenil®** 7% vet RTU found against trypanosomiasis in dogs is remarkable and may be viewed from the angle that there is no need to prepare solution unlike powder **Berenil®**, can be used in the remote places of veterinary practices.

References :

- Gill, B.S. (1991). Trypanosomes and Trypanosomiasis of Indian livestock, *ICAR, Publication*, New Delhi.
- Soulsby, E.J.L. (1982). Helminths, Arthropods and Protozoa of domesticated animals, **7th Edn.**, *Bailliere Tindall & ELBS*, London.

" We must always change, renew, rejuvenate ourselves; otherwise we harden "

- Goethe

Haemato-biochemical Investigations in Canine Demodicosis

G.V. Dhume, D.B. Sardode, N.P. Dakshinkar and G.B. Shrikhande

Department of Medicine, Nagpur Veterinary College, Nagpur -440006, MS

Abstract :

In demodectic mange, decreased haemoglobin level, neutrophilia, eosinophilia, elevated serum total proteins, hypo-albuminaemia and increased total globulin were recorded.

Introduction :

Canine demodicosis is a pernicious and inflammatory parasitic skin disease, characterized by alopecia, erythema and moderate pruritus, caused by the presence of abnormally high number of *Demodex canis*. The present investigation was undertaken to find out the different haematological and biochemical changes in canines affected with demodicosis.

Materials and Methods :

Dogs attending Nagpur Veterinary College Hospital, Nagpur for various skin diseases were subjected for skin scraping examination. The dogs confirmed for *Demodex* spp infection formed the basis of the present study and were subjected for detailed haematological and biochemical attributes.

The infected dogs, irrespective of their sex, age and breed, were randomly distributed in five treatment groups, making six animals in each group. The animals were examined clinically and blood samples were collected for haematological investigations and biochemical profile.

Results and Discussion :

The average haemoglobin concentration ranged from 8.16 to 12.6 gm/dl. The level of haemoglobin was observed lower when compared with normal values.

Similar findings were recorded by Harrison (1961), Pathak & Bhatia (1986) and Roy *et al.* (1991). Whereas, Ramakrishnan *et al.* (1972) reported no alteration in haemoglobin concentration.

The average total leukocyte count (TLC) was 11,025±1,202 to 14,206±1,055 thousand/Cumm. The observed leucocytosis was in agreement with the observations reported by Pathak & Bhatia (1986) but contrary findings were recorded by Roy *et al.* (1991). The generalized inflammation and the response of leucocytes to prolonged antigenic stimulus in the form of chronic demodex mite infection may be responsible for leucocytosis.

The average lymphocyte count was within normal range in all groups except group T1. Lymphopaenia in group T1, may be due to extensive lesions where humoral substance induced by large number of mites, suppresses the lymphocyte population, responsible for cell-mediated immunity. Reddy & Rao (1992) stated that dogs with localized demodicosis did not have suppressed immune response however, marked lymphocyte unresponsiveness to the T-lymphocyte mitogen was observed in generalized demodicosis.

Eosinophilia observed in the present study may be a reflection of hyper-sensitivity to persistent demodex mites in tissues. Ramakrishnan *et al.* (1972), Bhosale (1995) and Tadaskar (1998) also recorded eosinophilia in demodicosis.

Average monocyte count was within normal range. The erythrocyte sedimentation rate (ESR) was within normal range in localized cases whereas increased erythrocyte sedimentation rate was recorded in extensive and severe inflammatory lesions. This is in agreement with Ramakrishnan *et al.* (1972) and Tadaskar (1998).

Increased levels of estimated serum total proteins in the present study was in agreement with Hirsh *et al.* (1975), Reddy & Rao (1992) and Aujla *et al.* (1998).

Serum albumin values were decreased in all the treatment groups (Table).

Table : Showing Mean and Standard Error of Different Haematological and Bio-chemical for Five Treated Groups.

Parameter	T1	T2	T3	T4	T5
Haemoglobin (gm/dl)	10.5 ± 0.70	8.16 ± 0.46	8.55 ± 0.49	10.6 ± 0.88	11.13 ± 1.26
Total leucocyte count (thousand / Cumm)	14.206 ± 1.055	11.025 ± 1.202	13.916 ± 2.005	12.050 ± 0.876	11.758 ± 1.807
Neutrophil (%)	75.33 ± 3.99	65.33 ± 3.52	70.83 ± 4.52	65.66 ± 3.63	69.33 ± 2.57
Lymphocyte (%)	16.5 ± 3.38	25.33 ± 3.60	20 ± 4.77	27.33 ± 2.85	23.66 ± 1.98
Eosinophil (%)	5.5 ± 0.80	6.5 ± 0.61	8.83 ± 1.64	6.5 ± 0.99	5.5 ± 0.92
Monocyte (%)	2.66 ± 0.21	2.83 ± 0.47	2.0 ± 0.36	2.16 ± 0.16	1.5 ± 0.42
Erythrocyte Sedimentation Rate (mm/hr)	13.66 ± 2.01	10.66 ± 2.09	14 ± 1.43	12 ± 1.06	12.5 ± 1.92
Serum Total Protein (gm/dl)	8.0 ± 0.23	8.25 ± 0.16	8.2 ± 0.12	8.35 ± 0.22	8.4 ± 0.16
Serum Albumin (gm/dl)	2.13 ± 0.28	2.15 ± 0.42	1.7 ± 0.26	2.4 ± 0.25	1.76 ± 0.25
Serum Globulin (gm/dl)	5.86 ± 0.44	6.1 ± 0.39	6.5 ± 0.27	5.95 ± 0.29	6.63 ± 0.25

Pathak & Bhatia (1986) also recorded hypo-albuminaemia. Decreased levels of serum albumin in the present study may be the result of excessive breakdown of proteins which may be due to trauma to the skin by the proliferation of mites.

Serum globulin values were observed elevated. The elevated levels of globulin may be attributed to chronic skin disease.

Aujla *et al.*, (1998) reported that increase in total immuno-globulin circulating immuno-complexes levels, may be responsible for the elevation. Antigen antibody complexes may be responsible for increased in total globulin in the present study.

References :

Aujla, R.S., N.Sood, P.D. Juyal, S. Sondhiand P.P.Gupta (1998). *Ind. Vet J.*, **75**: 552.

Bhosale, V.R.(1995). M.V.Sc. Thesis submitted to Dr. P. Deshmuk, Krishi Vidyalaya, Akola

Harrison, J.W.(1961). *Small Anim Clin.*,**1**:362.

Hirsh, D.C., B.B. Baker, N. Wiger. S.G.Yaskulski and B.J. Obsurn (1975). *Amer. J. Vet. Res.*, **36** :1591.

Pathak, K.M.L. and B.B. Bhatia (1986) *Ind. J. Vet. Med.*, **6**:26.

Ramakrishnan, R., A.Sundararaj, S Damodaran And A.P. Chandrasekaran (1972). *Cherion*, **1**:11.

Reddy, N.R.J. and P.M. Rao (1992). *Ind. J. Vet. Med.*, **12**:4.

Roy, S., R.C. Ghosh and O.,P. Mishra (1991). *Ind. J. Anim. Health.*, **30**:131.

Tadaskar, A.V.(1998). M. V. Sc. Thesis Submitted to Dr. P. Deshmuk, Krishi Vidyalaya, Akola

Mean Survival Period of Broiler Chicks Infected as Embryos by Sub-group 'A' Virus

G.N. Dadhich¹ and P.K. Pani

Indian Veterinary Research Institute (IVRI), Izatnagar - 243 122, UP

Lymphoid leukosis (LL) is a virus induced lymphoblastic malignancy of the chicken. Rous sarcoma virus (RSV) of sub-group A has been frequently used as a model virus to understand genetic control mechanism of LL virus, because both are antigenically related and the former produces liver tumour (LT) death within an average period of 10 days. By chorioallantoic membrane (CAM) assay however, pocks on CAM is not an efficient index to recognise genetically resistant phenotypes. Therefore, this study was undertaken whether mean survival period (MSP) of LT death combined with CAM assay could provide better index in recognising genetically resistant (a^r a^r) phenotypes.

Materials and Methods :

(A) **The Chicken Lines :** Male line IC - 3 was developed by selection of Red Cornish birds for body weight at marketing age while female line IR - 3 was produced by selection for Juvenile body weight and egg production in White-ply mouth Rock birds upto 15 successive generations at Central Avian Research Institute (CARI), Izatnagar. These parent stocks (Po) were maintained by random mating. These stocks were free from LL virus.

(B) **P₁ Embryos :** Six week old birds, collected from CARI, were kept under random mating system to collect fertile eggs.

(C) **Embryos of Crosses :** Reciprocal crosses were made to collect fertile embryos of crosses. The females of line IC - 3 were crossed with males of line IR - 3 and vice - versa.

(D) **Virus Strain, CAM and LT Assay :** Bryan standard Rous sarcoma virus (BS-RSV) of sub-group A, supplied by, Dr. L.N. Payne, Houghton Laboratory, Institute of Animal Health, England was used. The stock solution titre (10^6 pock forming units/ml) was diluted with phosphate buffered saline to contain 10^3 puf/ml. The fertile eggs of each genetic group were incubated at 99.5°F and 84% relative humidity. Eleven - day old embryos of each genetic group were inoculated with 0.2 ml. BS - RSV containing 10^3 pfu / ml via CAM to conduct CAM assay (Pani *et al.*, in 1973). Embryos hatched following CAM inoculation were monitored for LT death upto 4 week post-hatch. Regression analysis was performed by taking MSP as dependent variable (Y) and log PCR (X) as independent variable. (Steel & Torre, 1969).

Result and Discussion :

The mean survival period at low PCR (0.1 log) varies as high as 19.50 in IR - 3 (P^o) to as low as 1.50 in IC - 3 (P^o). At high PCR (2.0 log), it was highest in IR - 3 (Po) While lowest in cross C₂. Average MSP is inversely proportional to PCR as reported by Pani & Nalhani, 1991. The data, reported also supports the four allele model (Pani & Nalhani, 1991 and Dadhich & Pani, 2002). It was observed that some of chicks (PCR=24) died within 3 days post-hatch while other (PCR=0) survived for more than 28 days. Thus, those chicks having $a^1 a^1$, $a^1 a^2$, $a^2 a^2$, genotype had shorter MSP and LT (+) while those having $a^2 a^2$ and $a^1 a^1$ genotype had longer, MSP (>28 days) and LT (-). Therefore, it can be concluded that

¹ Present Address : Veterinary Hospital, Sawar Ajm, Rajasthan - 305 407

Table : Showing Mean Survival Period (MSP) of Liver Tumour Positive (LT+) Chicks and Regression Analysis

Mean survival Period Figures in Parenthesis are Number of observations							ANOVA	
PCR	IC-3 P _o	P _i	IR-3 P _o	P _i	Crosses C _o	C ₂	Line	by.x
0.1	1.50 (2)	12.71 (7)	19.50 (2)	17.0 (3)	15.33 (3)	15.40 (5)	IC-3 P _o P _i	6.01* ± 1.58 2.97ns ± 1.41
0.6	14.50 (4)	10.66 (3)	15.53 (3)	12.80 (5)	12.75 (4)	11.50 (2)	IR-3 P _o P _i	6.76* ± 1.69 5.74* ± 1.45
1.2	8.0 (5)	11.40 (4)	12.50 (2)	10.25 (8)	12.40 (5)	10.16 (6)		
2.0	6.42 (7)	6.42 (7)	6.25 (7)	6.85 (12)	8.66 (7)	5.50 (3)	Cross C ₁ C ₂	2.68 ^{NS} ± 1.45 5.01 ± 1.45
Average	10.10	10.29	13.44	11.72	12.28	10.64		

P > 0.05, NS : Not significant, * Significant, a. No. of observations

knowledge of MSP combined with pock count can provide better index to recognise resistant chicks. However, further study with pedigree is needed to validate these findings.

References :

Dadhich G.N. and Pani P.K. (2002). *Ind Vet. J.*, **79** (2) : 134 - 136.

Pani P.K. and Nathani S (1991). *J. Exp. Biol.*, **29** : 416 - 421.

Pani P.K. and Biggs. P.M. (1973). *Avian Path.*, **2** : 23 - 41.

Steel, G.D.R. and Torre, H.J. (1969), *Principal and Procedures of Statistics, Mc - Graw Hill Book Company, Enc., The USA*

"It is impossible for any man not to have some enemies"

- Lord Chesterfield

"As to me, all I know is that I know nothing"

- Socrates

Efficacy of Floxidin® (Enrofloxacin) in the Treatment of Metritis in Cows

M.V. Ingawale, A.G. Sawale and R.L. Dhoble

Department of Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Parbhani

Abstract :

Floxidin® (Enrofloxacin) from Intervet India Pvt. Ltd. is fluroquinolone, used in treating both gram-negative and gram-positive infections, which subsequently reduces the toxemia at the dose rate of 5 mg per kg of body weight, intra-muscularly. So the present investigation was aimed to study the efficacy of **Floxidin**® (Enrofloxacin) in metritis cases. In the present study it was observed that **Floxidin**® (Enrofloxacin) stimulates involution in uterus and controls uterine infection effectively and also helps in establishment of ovarian rebound.

Introduction :

Uterine infections reduce the fertility due to increase in calving to conception interval (Blood *et al.*, 1989). Bacteria, unsanitary calving conditions, other pre-parturient diseases, endocrine factors, failure of uterine defence mechanism, poorly selected uterine treatments, excessive physical manipulation and nutritional aspects contribute to metritis. Bacterial infections and toxins stimulate the uterus to secrete abnormally higher levels of prostaglandins (Fedriksson *et al.*, 1988) which delay the onset of cyclicity until the infection is cleared. These uterine infections may delay the initiation of folliculogenesis and suppress the rate of follicular growth in dairy cows during early puerperium as well as (Peter & Bosu, 1988) by inhibiting LH release.

Materials and Methods :

The present study was conducted at Red

Kandhari Cattle Farm, Veterinary College, Parbhani. Twelve cows, suffering from metritis during the intermediate period, were selected. These cows were divided into two groups, i.e. group A (treated) and group B (untreated control). In the treatment group, injection of **Floxidin**® was administered intra-muscularly at the dose rate of 5 mg per kg of body weight for five days. In addition to **Floxidin**®, analgesic and anti-histamin were also given through intra-muscular route to the treated group for five days. Blood samples were collected in citrate vials to study the haematological changes.

Uterine discharge was collected in sterilized vials for isolation and identification of bacteria. Morphological difference including colour of uterine discharge and number of days taken for recovery after treatment and ovarian rebound were also studied.

Results and Discussion :

The uterine discharge was collected before and after treatment. On cultural examination of uterine discharge, it was revealed that bacterial isolates were present. Among these isolates, *Corynebacterium* sp., *Escherichia coli*, *Pseudomonas* sp., were predominantly found than the *Staphylococcus* sp., unidentified gram positive rods, *Klebsiella* sp., and *Staphylococcus* sp. The result obtained, regarding isolation of bacteria (Table I), was comparable with Jacob (1993) David & Bonnier (1987) and Gatne & Ranade (1996). The blood was collected to study haematological changes. There was increase in number of immature neutrophils in both the groups before treatment. But after treatment neutrophil

Table I : Showing Various Bacterial Isolates from the Uterine Discharge from Metritis Cases

Sr. No.	Name of the Organism Isolated	No. of Isolates From 12 Samples	Percentage of Isolates
1	<i>Corynebacterium</i> sp.	10	83.33
2	<i>Escherichia coli</i>	9	75.00
3	<i>Pseudomonas</i> sp.	7	58.33
4	<i>Staphylococcus</i> sp.	5	41.66
5	Unidentified gram positive rods	3	25.00
6	<i>Klebsiella</i> sp.	2	16.66
7	<i>Streptococcus</i> sp.	1	08.33

number was reduced. The other parameters like Hb, PCV TLC were not altered after treatment. (Table II).

The antibiotic sensitivity test was carried out by using various antibiotic bio-discs for various organisms and isolated from uterine secretions from metritis cases. The result of *in-vitro* antibiotic sensitivity against various isolates of metritis cases indicated that **Floxidin®** is the most effective than other antibiotics (Table III).

Various authors reported highly varying antibiotic pattern to uterine isolates (Bretzlaff *et al.*, 1982) and (Sinha *et al.*, 1977). These

differences might be on account of indiscriminate uses of antibiotics as well as resistance of organisms involved.

The colour of uterine discharge consistency and number of days taken for recovery with ovarian rebound were also studied. In the treatment group, the uterine discharge was stopped on an average five days post-treatment. The colour of uterine discharge was whitish to yellow with thin consistency. In this group, ovarian activity was observed on an average of fifty days after treatment. In the control group, the discharge was whitish to yellow, with thick consistency. Ovarian activity was not observed till the end of the experiment

Table II : Showing Haematological Values Before and After Treatment in Metritis

Status	Groups	Hb	PCV	TLC	Differential Leucocyte Count				
					L	N	E	M	B
Pre-treatment	Group A treated	11.32	33.96	8.9	57	35	3	5	0
	Group B untreated control	11.03	33.09	8.9	55	38	2	5	0
Post-treatment	Group A treated	11.22	33.66	8.8	58	36	2	4	0
	Group B untreated control	11.90	32.70	8.9	55	40	2	3	0

Table III : Showing Drug Sensitivity and Resistance Pattern of Uterine Isolates from Metritis Cases.

Sr. No.	Name of the Antibiotic	No. of Samples Tested	No. of Samples		Percentage (%)	
			Sensitive	Resistant	Sensitive	Resistant
1	Enrofloxacin (Floxicin®)	12	11	01	91.66	08.33
2	Ciprofloxacin	12	10	02	83.33	16.16
3	Gentamycin	12	09	03	75.00	25.00
4	Chloromphenicol	12	08	04	66.66	33.33
5	Ampicillin	12	05	07	41.66	58.33
6	Terramycin	12	03	09	25.00	75.00
7	Sulphamethaxazole	12	02	10	16.16	83.33

Table IV : Showing Observations on Colour of Uterine Discharge, Number of Days Taken for Recovery After Treatment with Ovarian Rebound in the Both Groups

Sr. No.	Group	Colour and Consistency of Discharge post-treatment	Time Taken for Cessation of Discharge	Ovarian Rebound
1	Group A treated (n=6)	whitish to Yellow with thin consistency	Five days	After fifty days
2	Group B Control (n=6)	Yellowish thick consistency	More than fifteen days	No ovarian activity

Conclusion :

It can be concluded that **Floxicin®** (Intervet India Pvt.Ltd.) stimulates involution of uterus, controls uterine infection effectively and also helps in establishment of ovarian rebound.

References :

Blood, D.C., Henderson, J.A., and Radostist, O.M. (1989). Veterinary Medicine, 7th Edn., The English Language Book Society, London.

Bretzlaff, K.N., Whitmore, H.C., Saphr, S.C. Ott, R.C. and (1982). *Theriogenology*, 17 : 507-535.

David, C. and Bonnier, M. (1987). *Vet. Bull.*, 57 : 59-69.

Gatne, M.M. and Ranade, V.V. (1996). *The Blue Cross Book*, 6:26-28.

Driksson, G., Kindahl, H., Alentus, Carlsson, U. and Uggla, A. (1988). *Proc. 11th Int. Cong. Anim. Reprod. and A.I.*, Vol. V, Ireland.

Jacon, J.C. (1993). M.V.Sc. Thesis, submitted to Kerala Agricultural University, Peter, A.T. and Bosu, W.T.K. (1998). *Theriogenology*, 30: 1045,

Sinha, A.K., Ameja, D.V. and Singh, B.K. (1977). *Ind. Vet. J.*, 54:528-532.

" Need and struggle are what excite and inspire us"

- Charles H. Brower

Case Report : Pseudo-pox in Cow and Man

Mohd. Rashid

Department of Animal Husbandary, Kot Bhalwal, Jammu, J&K

Introduction :

Pseudo-pox in cow is an infectious viral anthropo-zoonosis of veterinary and abattoir workers (Allenstein, 1980), It is also known as milker's nodules or Ring sore. It is characterised by cutaneous eruptions on the teats, udder and perineum of lactating cow and buffaloes having a close resemblance to cow-pox and buffalo-pox (Lander, 1971). The disease has been reported in most of the countries like England and USA (Gibbs & Osborne, 1974), Nigeria, (Asagba, 1982), as milker's nodules from water-buffaloes in West Bengal, India (Mitra & Chatterjee, 1986).

Pseudo-pox in cow is caused by a virus of the genus. Parapox virus which has got morphological resemblance to the viruses that cause contagious ecthyma & bovine papular stomatitis (Olson & Paliones, 1953). The present study high lights the occurrence of pseudo-pox in cow and affecting milker in Jammu (J&K).

History and Observation :

A local cow with a history. "formation of area of erythema on teats and udder, reluctant to yield milk" was brought to the department of AH. The owner of the cow was also showing lesions (Fig.), known as milker's nodules on the hands. The examination revealed vesicles, pustules, few thick scabs and very few horse shoe shaped lesions (ring sore) formed as result of removal of scabs near teats during milking.

Diagnosis :

The diagnosis is made on the basis of case history & clinical findings.

Treatment :

Symptomatic and palliative treatment was given to the animal. To prevent the secondary bacterial infection, a course of antibiotic Enrofloxacin (**Floxidin**[®] from Intervet India Pvt. Ltd.) at the rate of 5mg/kg body weight for 5 days and analgesic & antipyretics, **Novalgine**[®] (from Intervet India Pvt. Ltd.) 15ml daily for 3 days were prescribed. On the other hand, povidone iodine was also used on scab and other lesions. The animal recovered within two weeks.



Fig. Showing Lesions on the Owner's Hand, known as Milker's Nodules

References :

- Asagba, M.D. (1982). *Trop. Anim. Health. Prod.*, **14**:184.
- Allenstein, L.C. (1980). In *Bovine Medicine and surgery*. Etd. Amstutz, H.E. **Vol.I. Amer. Vety. Pub. Inc.**, California. PP. 195.
- Gibbs, E.P.J. and Osborne, A.D. (1974). *Br. Vet.J.*, **130**:150.
- Lauder, I.M. (1971). *Vet. Rec.*, **89**:571.
- Mitra, K. and Chatterjee, A. (1986). *Ind. J. Zoonoses.*, **13**:141.
- Olson, C. and Paliones, T. (1953). *J. Amer. Vet. Med. Assoc.*, **123**:419.

Case Report : Treatment of Capped Knee (Hygroma) in a Buffalo

Pawan Kumar

College of Veterinary Hospital, Jakhal, Tohana-125 133, Fetehabad

Abstract :

A buffalo was having a swelling at the left knee joint for last 4-5 years. It was dignosed as hygroma at the knee (Cappew Knee). The same was operated upon and the buffalo recovered within one month.

Case History :

Ten years old buffalo was presented to college of veterinary hospital, Jakhal with the history of a big swelling at the left knee joint. The buffalo was brought from Moonak village, Sangrur district, Punjab. The buffalo was said to have this swelling (Figs. 1 & 2) for the past 4 - 5 years, slowly increasing in size day by day. The swelling was so big that buffalo was resting its head, using it as a pillow. The owner has shown it to many places but the present case was undertaken to treat this buffalo surgically.

Diagnosis :

The buffalo was carefully examined. It had too much difficulty in walking. All the other physiological parameters were normal. With an exploratory needle puncture at the swollen part, the case was diagnosed as hygroma of the knee (capped knee).



Fig.1 : Showing Swelling of the Leg from the Front Side.

Treatment :

After properly restraining the buffalo, 5 ml of siquill was given by i.v. Then theswollen part was properly

washed by Kondy's lotion. Following to this, an incision at the lower end of the swelling was made. Lot of thin milky fluid (about 12 to 15 litres) having no foul smell rushed out. The owner and the villagers were wondering that milk was coming out. But actually the fluid contained part of dissolved bones of the knee joint. After squeezing out the fluid the internal part of the wound was irrigated with cold Kondy's lotion to check the bleeding and to disinfect the wound. Lot of loose fold of skin was hanging at the knee joint and it was not trimmed for the fear of bleeding which would endanger the life of the buffalo. Hence, sutures were applied twice closer to the border of the knee joint over the skin so as to check the blood supply to the excess, loose fold of hanging skin. Through the incised protion of wound about 1 kg of magnesium sulphate was stuffed into the loose fold of skin. Later, pressure bandage was applied over this knee joint.



Fig. 2 : Showing Swelling of the Leg from the Back Side

After two days, this procedure was repeated. Seven days after the operation, the blood supply to the excess fold of skin was withheld and therefore, the excess loosely hanging skin was trimmed off and povidon iodine was applied as an antiseptic dressing. Three days later, the sutures were removed. A groove was seen on the bones of knee joint since part of the bones was dissolved in the fluid. Povidon iodine was applied as an antispetic dressing for a further period of 15 to 20 days. Seven days post-

operation, injections of DCR 5 gm daily, **Novlgin**[®] (Intervet India Pvt. Ltd.) 15 ml daily and **Avil**[®] (Intervet India Pvt. Ltd.) 5 ml daily were administered. The buffalo recovered within one month.

Acknowledgement :

The author thanks to Mr. Hawa Singh (VLDA), Mr. L.K. Maneta (VLDA) and Mr. Dalip Singh of C.V.H. Jakhal for the technical help, rendered during the operation.

Deltamethrin
butox[®] 15ml

Introducing
the new

Deltamethrin
butox[®] Vet 15 ml

Shield
against
ECTOPARASITES

Intervet

ब्यूटॉक्स

Made in India by: Intervet Laboratories Ltd.
Regd. Off. Bahadurgarh, Dist. Feroze Nagar Road,
Wazirpur - 151021, Dist. Pathankot
Mfr. at: I-161, MIDC, Tankpur, Thrane - 421508

*Small presentation...
....Large benefits!*

Intervet

Efficacy of Pre-insemination GnRH Treatment on the Conception Rate in Repeat Breeder Cows

R.R. Shelar, V.L. Deopurkar, S.A. Bakshi, S.R. Chinchkar and S.U. Gulavene

Department of Gynaecology & Obstetric, Bombay Veterinary College, Parel, Mumbai - 400 012, MS

Abstract :

An attempt was made to assess pre-insemination use of GnRH in 20 non-infectious repeat breeding Gir Cows and its cross varieties (G x H.F.G x J). About 10 µg Buserline acetate (**Receptal**[®], Intervet India Pvt. Ltd.) was injected intra-muscularly just before insemination in treatment group of animals.

Conception rate in the treatment group was 60% which was 20% over and above control group. GnRH (Buserline acetate) had no influence on subsequent serum progesterone level at 14th and 22nd day post-insemination.

The properties of oestral mucous discharge were also studied like pH, Spinnbarkeit test and *in-vitro* sperm penetration test. A highly significant difference was observed between un-fertile and fertile oestruses.

Introduction :

Repeat breeding is a major problem of infertility in dairy cows causing huge economical losses to the dairy farmers. Due to low endocrine profile of indigenous cattle, delayed ovulation is common contributing factor of repeat breeding (Bostedt, 1976, and Fahrback, 1982).

Delayed ovulation or unovulatory oestruses are due to delayed LH surge. GnRH plays an important role for release of LH surge. Therefore, an attempt was made to study the pre-insemination efficacy of GnRH on conception rate of repeat breeder cows.

Material and Methods :

In the present study, 20 repeat breeder cows (Gir and its crosses) were selected from cattle breeding farm, Kandivali, Mumbai. All animals

were kept under uniform managemental conditions.

Cows with history of more than three unfertile oestruses at regular intervals of 18-24 days were screened by rectal palpation for any adhesions, anatomical abnormalities etc. Oestral mucus was critically watched for pus, flakes as well as colour, consistency fern pattern, pH, Spinnbarkeit test and *in-vitro* sperm, penetration test. The Circulating levels of serum progesterone were monitored on 0, 14th and 22nd day post-insemination by RIA method.

Twenty animals with normal genetic with clear thick mucus discharge and having typical fern pattern, were selected for experimental group. The experimental animals were randomly divided into group A, as control and group B, as treated one.

Group A :

In this group, 10 cows were inseminated after 10 to 12 hours of commencement of oestrus i.e. "Standing oestrus"

Group B :

This group, comprised of 10 cows, were inseminated at "Standing oestrus". Before insemination, 2.5 ml GnRH analogue **Receptal**[®] (10 µg Buserelin) was injected intra-muscularly.

Pregnancy was confirmed, 60 days post-insemination by per rectal palpation.

Results and Discussion :

The difference in mean pH value of cervical mucus in fertile (8.3) and non-fertile (7.9) oestruses was highly significant. Mean

Spinnbarkeit value of fertile (14.7cm) and non-fertile (10.9cm) oestruses had shown highly significant difference. The difference in mean sperm penetration into cervical mucous for fertile (13.5mm/5 min) and non-fertile (9.5mm/5 min) oestruses were found to be highly significant. The serum progesterone level in pregnant cows of GnRH treatment group on 'O' 14 and 22 day post-insemination were 0.23, 3.12 and 5.12 respectively while in control group levels were 0.27, 3.39 and 4.63. In the treated group, serum progesterone level on 22 day was slightly higher than control group but it was not significant. It was observed that GnRH treatment had no influence on subsequent serum progesterone profile of 14 and 22 post-insemination day. Results of present study indicated that there was an in the treated improvement of 20% conception rate over the control group. Findings of the present study are in agreement with Gunzler *et al.*, (1977), Rao & Rao (1984), Steven *et al.*, (1988), Shankar *et al.*, (1989), Mujumdar (1989) and Ileri *et al.*, (1995). However Nakao *et al.*, (1983), Phatak *et al.*, (1986), Stevenson *et al.*, (1990) and Bon Durant *et al.*, (1991) reported an increasing 5 to 10% conception rate which was lower than the present study. Archbald *et al.*, (1993) reported increase in conception rate only by 2% over the control group.

After critically going through the present observation and analysing the data, it can be seen that variable results are obtained regarding the conception rate after pre-insemination use of GnRH. These variations might be because of difference in dose (10µg, 20 µg, 100µg, 0.50 mg and 0.125 mg), synthetic GnPH or GnPH analogue.

Table : Showing conception rate in different groups.

Group	No. of cows	No. of cows pregnant	Conception Rate
Control A	10	4	40%
Treatment B	10	6	60%

This indicates that pre-insemination use of GnPH helps to improve conception rate in repeat breeding cows, having apparently normal oestrus.

References :

- Archbald L.E.; Sumrall, O.P.; Tran T. and Klapstein E. (1993). *Theriogenology*, **39** (5): 1081-1091.
- Bon Durant R.H. Ravh I, Franti C; Hisd, D., (1991). *Theriogenology*, **35** (2) 364 - 374.
- Bostedt H. (1976). 8th International congress. *Anim. Reproduction*, 552 - 554.
- Fahrbach H. (1982). *Anim. Breed Abstr.*, **50** (4) : 1916.
- Gunzler, O; Krieger H. Andn Jordan E (1977). *Anim. Breed Abstr.*, **45** (8) : 3758.
- Ileri I.K ; Papuccuoglu. S. and Alkan, S (1995). *Anim. Breed Abstr.*, **63** (3) : 885.
- Mujumdar, K.P. (1989). *Ind. J. Anim. Reprod.*, **10** (2) 183 - 184
- Nakao, T. Narita, S; Janaka, K., Hara, H and Saga, N. (1983). *Theriogenology*, **20** (1) : 111 - 119.
- Phatak A.P., Whimore, H.L. and Brown M.D. (1986). *Theriogenology*, **26** (5) : 605 - 609.
- Rao, A.R. and Rao K.S. (1984). *Ind., Vet. J.*, **61** : 813.
- Shankar V.M.; Dhoble R.L. and Agrawal, S.K. (1989). *J., Dairy Sci.*, **42** (2) : 210 -211.
- Steven, J.S. ; Call E.P.; Scoby K.K. and Phatak A.P. (1990). *J. Dairy Sci.*, **42** (2) : 210 - 211.
- Stevenson, J.S. Frantz K.D. and Call E.P. (1988). *Theriogenology*, **29** (2) : 451 - 460.

Case Report : Successful Treatment of Bovine Fetal Mummification with Iliren®

M.K. Awathi and R.P. Tiwari

Department of Obstetrics & Gynaecology, College of Veterinary Science & A.H., Anjora, P.B. No. 6, Durg - 491 001, CG

Abstract :

Successful use of prostaglandin for treatment of bovine fetal mummification has been reported. In the present study, it was observed that single injection of PGF₂α (Iliren®) can successfully be used for expulsion of mummified fetus in crossbred cows. The fertility of dams following expulsion of mummified fetus was normal.

Introduction :

Mummification of fetus occurs following fetal death when parturition-abortion mechanism fails to occur (Arthur *et al.*, 1982). The mummified fetus remains *in-situ* beyond the length of gestation as corpus luteum of pregnancy and persists to release progesterone. The cause of fetal mummification is often impossible to determine, because the time of fetal death is not known. The autolysis and mummification of fetus & membranes make determination of causative agent (Roberts, 1971). The present study reports three cases of bovine fetal mummification under field condition which were successfully treated.

Case History and Treatment :

Three cases of fetal mummification were recorded in HF crossbred cows under field condition. Earlier, pregnancies were confirmed in these cows, between 60 to 90 days post-service. They failed to deliver calf at the expected period of parturition. However, no signs of approaching parturition were noted in these animals. Following rectal examination, these animals revealed, contracted uterine wall over small sized fetus with absence of fetal fluid,

cotyledons and fremitus. The fetus was palpated as a hard, dry leather like lump inside the uterus with well defined corpus luteum on the ovary in each case. These observations confirmed the diagnosis of fetal mummification. To expell out the mummified fetus, these animals were treated with single intra-muscular injection of 25mg of PGF₂α (Iliren®, Intervet India Pvt. Ltd.). Following expulsion of mummified fetus, the genitalia of each were palpated to assess the time required for complete involution of uterus.

Results and Discussion :

In two cases, the mummified fetus was expelled spontaneously within 72 to 96 hours after the treatment. However, in one case chocolate brown coloured mucoid discharge was observed on the 4th day of treatment, without expulsion of mummified fetus. Per vaginal examination revealed presence of mummified fetus in vaginal cavity which was manually removed. Two cows subsequently exhibited signs of estrus, immediately following expulsion of mummified fetus while third cow came in estrus on the 24th day. Rectal palpation of affected animals on alternate days revealed that involution of uterus occurred very rapidly and it took 6 to 10 days for completion of uterine involution. After providing breeding rest for 40 to 50 days, these animals were inseminated with fertile frozen semen and they conceived requiring on an average 1.66 services for conception. They completed their gestation without any complication and calving occurred normally. There are two approaches to regress corpus luteum of pregnancy. Manual removal of corpus luteum, may lead to fatal haemorrhage

or to ovarobursal adhesions in some cases (Arthur *et al.*, 1982). Therefore, it is worthwhile to use therapeutic approach to regress corpus luteum, using either high doses of stilbesterol or PGF₂α. High doses of stilbesterol may cause development of cystic ovarian degeneration, therefore, parental injection of PGF₂α (**Iliren**[®])analogue is preferred for the treatment. Successful use of prostaglandin for treatment of bovine fetal mummification has been reported earlier by Tamuli *et al.*, (1987), Ramchandrai & Reddy (1992). However, Agrawal & Uma Shankar (1998) reported use of stilbesterol and oxytocin along with PGF₂α (**Iliren**[®]) for treatment of fetal mummification in Haryana and a crossbred cow. It may be concluded that single injection of PGF₂α (**Iliren**[®]) can successfully be used for expulsion of mummified fetus in crossbred cows. The

fertility of dams following expulsion of mummified fetus was normal.

References :

Agrawal, S.K. and Uma Shankar (1998). *Ind. J. Anim. Reprod.*, **19** (1) : 74. Arthur, G.H., Noakes, D.E. and Pearson, H. (1982). *Veterinary Reproduction and Obstetrics. ELBS, London*, pp: 94-96.

Ramchandrai, K. and Reddy, Mohan A.R. (1992). *Ind. Vet. J.*, **69**: 452-453.

Roberts, S.J. (1971). *Veterinary Obstetrics and Genital Diseases. CHS Publishers & Distributor*, pp: 170-174.


Tamuli, M.K, Rajkonwar, C.K. and Borgohain B.M. (1987). *Ind. Vet. J.*, **64**: 608-609.

Berenil[®] vet 7% RTU


Aseptic, Time Saving & Convenient

- Babesiosis
- Trypanosomiasis
- Theileriosis
- Pyrexia of Unknown Origin

..... eliminates the stage of getting ready.



Intervet India Pvt. Ltd., Plot No. 41, The Sagar Co-operative Housing Society Ltd.
Road No. 2, Banjara Hills, Hyderabad - 500 034
Ph. : 040-6564401-03, Fax: 040-6564411, e-mail : intervet@hd2.vsnl.net.in



Case Report : Sudden Death in a Cow due to Ventricular Septal Abscess

A. Ghadrnan, B. Mohammadian and R.N. Kohli

Department of Veterinary Clinical Sciences, Shahid Chamran University, AHWAZ, IRAN

Sudden death is usually defined as a "Category of illness in which animals kept under frequent observation die either with no sign of illness or after a period of illness lasting a few hours". Though instances of group deaths resulting from electrocution, lightning, injury, poisoning, septicaemia, toxemia etc. are often investigated and reported in veterinary literature, cases of sporadic deaths in cattle are rarely published. A case of sudden death in a cow observed in December 1998 is presented here.

A seven year old local non-descript cow that had earlier been successfully treated at the clinic of Shahid Chamran University, Iran, for post-parturient chronic purulent metritis few months back, was now reported to have died suddenly without showing any sign of illness or discomfort. The carcass, which had no visible pathological lesion on its external surface or the openings, was presented within two hours. An immediate necropsy revealed that all organs, except the heart, were normal. The myocardium (Fig.1) in general was pale

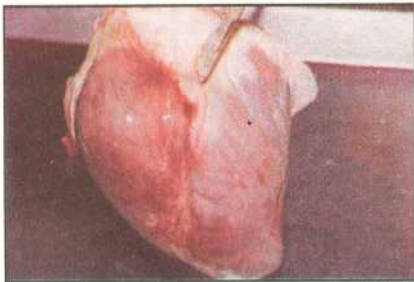


Fig 1 : Scalpel Pointing to the Cardiac Area, Beneath Which the Ventricular Septal Abscess was Located. Note the Particularly Pale Myocardium.

in appearance but was particularly so in an area underneath which a large abscess, about 4cm in diameter and involving the septum between the ventricles, was found (Figs. 2 and 3). The pus was yellowish in colour and its cultural examination was positive for *Actinomyces pyogenes*. The cardiac histopathological changes were suggestive of myocardial infarction.

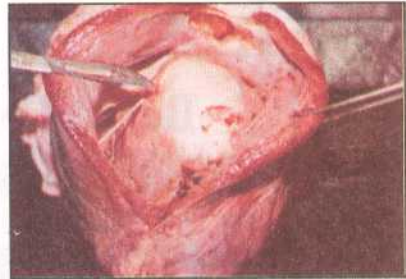


Fig.2: Incision of Myocardium and the Abscess Releases Yellowish Pus.

Discussion :

Heart disease is often considered a major cause of sudden death syndrome in sporadic cases. The deaths in cardiac myopathy result

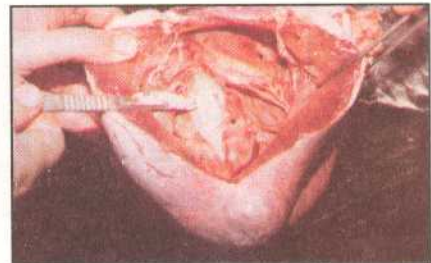


Fig.3: The Abscess after Evacuation of Most of the Pus. Scalpel Points to the Wall of the Abscess.

from sudden cardiac arrest or acute heart failure (commonly referred to in humans as "heart attack") following acute anoxia of tissues especially brain. Myocardial infarction is an acute necrotic process of the myocardium, occurring as a result of oxygen deprivation to the affected tissue due to obstruction of blood supply, usually associated with thrombosis and embolism etc. Though not a common disease in animals, it is a cause of myocardial weakness or myocardial asthenia. Endocarditis and myocarditis resulting from bacteria, virus, and toxins also reduce the cardiac reserve, possibly to the point to precipitating heart failure. The vegetative lesions of endocardium, particularly in endocarditis of bacterial origin, apart from causing insufficiency or stenosis due to involvement

of heart valves, can also cause septic emboli. It is also well known that endocarditis in large animals does occur secondary to chronic infection at some distant site without any predisposing lesions in the heart.

In view of the foregoing it was summarised that in the present case, the cow suffered from chronic uterine infection which led to vegetative endocarditis with emboilic showering of bacteria causing myocardial abscess and embolic infarction leading to acute heart failure and sudden death.

Reference :

Radostitis, O.M., Blood, D.C. and Gay, C.C. (1994): Veterinary Medicine, 8th Edn., Bailliere Tineal, London.

"If a man is worth knowing at all, he is worth knowing well"

- Alexander Smith

"An individual can make no greater investment in his business of living than to be consistently reliable and cooperative.

The important job is almost always turned over to the dependable man. Dependability is as simple as that, but it is one of the rarest of assets."

- Douglas Lurton

"You cannot get butter by crying yourself hoarse, 'There is butter in the milk!' If you wish to make butter, you must turn the milk into curds, and churn it well. Then alone you can get butter. So if you long to see God, practice spiritual exercise"

- Sri Ramakrishna Paramhansa

Case History : Clinical Management of Hypo-magnesemia in Calves

J.P. Varshney and Rakesh Ranjan

Division of Medicine, Indian Veterinary Research Institute (IVRI), Izatnagr - 243 122, UP

Abstract :

Hypo-magnesemic tetany is a common syndrome in calves raised solely on whole milk for prolonged period (Radostits *et al.*, 1994). In the recent past, the disease has been diagnosed and reported frequently in calves in India (Prasad *et al.*, 1980, Raina *et al.*, 1994 and Agarwal *et al.*, 1998). Since hypo-magnesemia tetanic syndrome in neonates possesses similarity with tetanus, strychnine poisoning, lead poisoning, polio-encephalomalic and avitaminosis-A (Radostits *et al.*, 1994), it needs an early and proper diagnosis to avert fatality. The present report thus describes clinico-biochemical changes and successful clinical management of hypo-magnesemic calves.

Case History :

Two calves (female calf-four weeks old and female buffalo calf-six weeks old), fed exclusively on milk, were referred to Institute's Veterinary Polyclinic (O.P.D. No 3859 at 28-3-2001 & 3994 at 17-4-2001) with the complaint of anorexia, stiffness of limbs, staggering gait and prostration.

Clinical and Laboratory Examination :

Clinical examination of the calves revealed normal temperature (102°F and 101.4°F), pulse rate 68/minute; tetanic spasm, hyper-aesthesia, nervousness, stiffness of limbs, backward carriage of ears, ataxia without circling champing of jaw, extended curved neck, hard blackish faeces, starring bulging eyes with dilated pupil and dehydration. Laboratory analysis revealed low serum magnesium (0.8 and 0.62 mg/dl) and calcium (6.8 and 8.0 mg/dl) levels. Faecal samples were negative for parasitic eggs.

Diagnosis :

Based on history and clinical & laboratory findings, both cases were diagnosed as hypo-magnesemia with concurrent hypo-calcemia.

Treatment :

The calves were given 50ml of solution, containing magnesium, calcium borogluconate together with phosphorus and dextrose and the same amount sub-cutaneously, immediately after diagnosis was carried out. Two ml of vitamin B-complex was given intra-muscularly as general tonic. Trifluoperazine hydrochloride was given intra-muscularly at the dose rate of 20mg/100kg body weight as sedative. Treatment was continued for next day and on the third day, calcium and magnesium preparation was given only sub-cutaneously. The owners were advised to feed 1.0g magnesium oxide daily for one month and to initiate the feeding of hays slowly.

Discussion :

In both the calves hypo-magnesemia was accompanied by mild hypo-calcemia and symptoms observed in these cases were similar to cases reported by many workers (Prasad *et al.*, 1980, Raina *et al.*, 1994 and Agarwal *et al.*, 1998). In cow-calf tetanic convulsions were not severe as serum magnesium level was not below 0.7 mg/dl (Kaneko, 1989). Since both the calves had hypo-calcemia of varying degree, it might have contributed to some of the clinical manifestations. Milk being the poor source of magnesium, dependence of the calves solely on milk might have caused hypo-magnesemic tetany.

It is difficult to diagnose a case of hypomagnesemia merely on the basis of history and clinical symptoms as convulsions in calves are also seen in acute lead poisoning, tetanus, strychnine poisoning, polio-encephalomalacia, enterotoxemia and avitaminosis - A (Radostits *et al.*, 1994); but development of muscle twitching, hyper-aesthesia and no prolapse of nictitating membrane in milk fed calves are suggestive of hypo-magnesemic tetany and clinical response to magnesium therapy provides enough evidence of hypomagnesemia. However, low value of serum magnesium are of confirmatory value. Concurrent hypo-calcemia may be result of hypo-magnesemia as low magnesium levels inhibit the target organ response of parathyroid hormone and may be one of the cause of hypocalcemia often seen with hypomagnesemia (Kaneko, 1989). Decrease in solubility of calcium ions in body fluids as a result of fall in

magnesium ion concentration of extra-cellular fluid may be another explanation of such condition.

References :

- Radostis, O.M., Blood, D.C. and Gay, C.C. (1994). *Veterinary Medicine*. **8th Edn.**, ELBS, London, pp 1341 - 1343.
- Kaneko, J.J. (1989). *Clinical biochemistry of domestic animals* **4th Edn.**, Academic Press, London, pp 737-738.
- Prasad, B., Bhardwaj, R.M. and Singh, R.P. (1980). *Ind. Vet. J.*, **57** : 597-599.
- Raina, A.K., Sharma, S.K., Wadhwa, D.R. and Mandal, R.K. (1994). *Livestock Advisor*, **29** : 23-25.
- Agarwal Y., Chourasia Pragya, Varshney, J.P., Dey, S. and Dwivedi, S.K. (1998). *The Veterinarian*, **22**:13-14.

“ The integrity of men is to be measured by their conduct, not by their professions ”.

- Anon

“ Hope the best, but prepare for the worst ”.

- English Proverb

“ We do not deal much in facts when we are contemplating ourselves”.

- Mark Twain

“ Every man is the architect of his own.”

- Keluzu

“ Let us fear God and we shall cease to fear man”

- Mahathma Gandhi

“ The Fox changes his skin but not his habits.”

- Suetonius

Case Report : Erratic Migration of *Cysticercus tenuicollis* in Doe

R.R. Momin, H. R. Parsani, and D.B. Patil

Department of Veterinary Parasitology, College of Veterinary Science & A.H., Gujarat Agricultural University, Sardarkrushinagar - 385506, Gujarat

Taenia hydatigena is a primarily tape worm of small intestine of dog and fox in India. The intermediate stage of this parasite is seen in ruminants like sheep, goat, cattle, buffalo and pig, termed as *Cysticercus tenuicollis* which normally develops in peritoneum of these animals. Incidence of *Cysticercus tenuicollis* in peritoneum has been reported in domestic animals from various parts of India by various workers (Arora *et al.*, 1971, Kurkure *et al.*, 2000 and Verma, 1991) and in deer (Kolte *et al.*, 1998). The present report deals with erratic migration of *Cysticercus tenuicollis* cyst sub-cutaneously on ventral aspect of left jaw in a female goat.

A female goat (doe) of three and half year of age, was brought to college hospital for treatment of swelling of left ventral jaw. On clinical examination, a tennis ball sized cyst was observed on the ventral aspect of the left jaw. It was operated and collected for identification. The cyst was large, semi-transparent (7 to 8 cm). The cyst was dissected out and revealed number of larval stages of *Taenia hydatigena*. The scolex was invaginated with long neck and bladder which has two rows of 26 and 46 rostellar hooks. Suckers were unarmed (Fig.). The cyst was identified as *Cysticercus tenuicollis* metacestode of *Taenia hydatigena* as per description made by Soulsby (1986). This

finding indicates that the metacestode wander aberrantly in goat sub-cutaneous tissue and prevalence of such cyst in the area indicates higher incidence of *Taenia hydatigena* in dog.



Fig. : Microscopic View of *Cysticercus tenuicollis*

References :

- Arora, R.G., Kalra, D.S. and Iyear, P.K.R. (1971). *Haryana Agricultural University Journal of Reserach*, 1:27.
- Kolte, S.W., Ganorkar, A.G. and Kurkure, N.V. (1998). *Ind. Vet. J.*, 75:834.
- Kurkure, N.V., S.W. and Ganorkar, A.G. (2000). *Intas Polivet*, 1(2) : 241.
- Soulsby, E.J.L. (1986). *Helminths, Arthropods and Protozoa of Domesticated Animals*, 7th Edn., Baillire Tindal, East Bourne.
- Verma, I.K. (1991). *Livestock Advisor*, 16:9.

“ To pray to God and meditate on Him for even two minutes with full concentration is better than doing so far long hours without it.”

- Shree Saradamani, The Holy Mother

Case Report : Abscess at Peri-udder Region in a Buffalo and its Surgical Management

S.K. Tiwari and S.K. Yadav

Department of Surgery & Radiology, College of Veterinary Science & A.H., Anjora, P.B. No.6, Durg - 491001, CG

Abstract :

An abscess is an abnormal cavity containing pus and the cavity is formed by local suppurative inflammation. An abscess in close vicinity to an organ or joint may have dangerous complications. The present study reports a case of large abscess in the rare site i.e. peri-udder region which was treated successfully.

Case History :

A murrah buffalo, aged six and half years, was brought to the Department of Surgery & Radiology with the complaint of swelling at the posterior udder region and evidence of pain on milking the hind quarter teats for the last 7 days. The area was hit by another buffalo about 20 days ago. Clinical examination of the animal revealed, a huge swelling at the posterior udder region which



Fig.: Showing Huge Swelling at the Posterior Udder Region with Pointing of Abscess.

was fluctuating at a definite point but the periphery was hard (Fig.). Hot fomentation with magnesium sulphate was done for 2 days to ensure the maturation of the abscess. On the 3rd day, it was decided to incise the abscess and drain the pus from it.

Surgical Treatment :

The buffalo was pre-medicated with xylazine hydrochloride (30 mg) intra-muscularly to clam down the animal. The site was prepared for aseptic surgery. A bold crucial incision was given at the point of abscess. About two and half litres of pus was drained from the abscess. The abscess cavity was thoroughly cleaned with povidone iodine and the presence of any foreign body was explored. The cavity was packed with silver sulphadiazine ointment and neosporin powder. Post-operatively, **Floxidin**[®] (Intervet India Pvt. Ltd.) at the dose rate of 15ml per kg body weight intra-muscularly for 5 days, diclofenac sodium, at the dose rate of 20ml per kg body weight for 3 days, were given. The Dressing was done with silver sulphadiazine ointment and neosporin powder for 7 days.

Result and Discussion :

The animal recovered completely on the 8th post-operative day. Abscess in the peri-udder region in rare is occurrence. In the present case, the abscess might be due to the injury caused by sudden blow by the other animal as reported by the owner. Similar observations have been reported by Tyagi & Singh (1993) in ruminants. Thus, surgical incision of the mature abscess and its perfect evacuation leads to rapid healing and faster recovery.

References :

- Tyagi R.P.S. and Singh, J (1993). Ruminant Surgery, **1st Edn.** CBS Publishers and Distributors, New Delhi.
- Venugopalan, A (1993). Essentials of Veterinary Surgery, **1st Edn.** Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.

Case Report : Management of Incomplete Cervical Dilatation in a Cow

Madhumeet Singh, Rajesh Sharma, Karandip Singh, N.K. Vasishta and Pankaj Sood

Department of Animal Reproduction, Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, CSK Himachal Pradesh Krishi Vishwavidyalaya, Palampur-176 062, HP

Abstract :

Administration of PGF₂ alpha (**Iliren**[®] - Intervet India Pvt. Ltd.) injection along with valediamate bromide is the recommended treatment in such cases to cause corpus luteum (CL) lysis and uterine contraction and subsequently facilitating cervical dilatation. In present case, since partial response was observed after first treatment of **Iliren**[®] a second treatment was also given and cervix was found to be dilated and dead fetus was delivered by traction.

Introduction :

Failure of cervix to dilate completely is relatively common cause of dystocia in dairy cattle which can arise during abortion of full term. It can occur both in heifer and in multi-parous cows. The condition can arise due to hormonal imbalance and course of labor in such cases is atypical (Arthur *et al.*, 1989). It may also be associated with severe fibrosis, induration or sclerosis of cervix. This is observed most commonly in older cows with a history of cervical lacerations and cervical and uterine infections that render the cervical and uterine muscles incapable of responding to the normal stimulus of hormones, required for cervical dilatation and uterine contractions. This may also be seen in cases of uterine inertia, which is due to a failure of usual or necessary hormones to be secreted to cause cervix to dilate (Robert, 1971).

Case History :

A heifer, aged four years, was presented in clinics with the history of labor pains and straining efforts observed two days earlier. It was the first calving of the animal. Teat filling

was complete two days back and now teat shrinkage has started. No discharge, either watery or mucoid, was observed from the genital tract.

Clinical Examination and Treatment :

On clinical examination, muzzle was found dry, rectal temperature was 102°F, cervix was one finger dilated, fremitus was poor and there were no fetal movements. Broad ligaments were partially relaxed. After ruling out uterine torsion, this was diagnosed as a case of incomplete cervical dilatation.

On the first day, 5ml of PGF₂ alpha (**Iliren**[®] - Intervet India Pvt. Ltd.) was administered along with 120 mg of valediamate bromide and 40 mg of diethylstilbesterol, all were given by intra-muscular route. After 12 hours of treatment, per vaginal examination was started and after 24 hours of the treatment cervix was found to be only three fingers dilated. So a second dose of 5ml of PGF₂ alpha (**Iliren**[®] - Intervet India Pvt. Ltd.) and diethylstilbestrol 40 mg were given intra-muscularly. This time 40 mg of dexamethasone was also administered intra-muscularly. Beside these, hot water fomentation of anterior vagina was also carried out for 15 minutes at every 2 hours interval. Six hours after of second treatment, cervix was found 5 fingers dilated and water bags were palpated intact. About 2 hours after this, it was possible to pass full hand freely in cervix. After about 12 hours of the 2nd treatment, cervix was found to be almost fully dilated and dead fetus was delivered by traction. Immediately after delivery, 50 IU of oxytocin was injected intra-muscularly. streptopenicillin

2.5 g, diclofenac sodium 250 mg and 10 ml of liver extract were given by intra-muscular route as supportive treatment. Fluid therapy was also carried out with normal saline and dextrose normal saline. Animal was discharged on the next day of fetal delivery advising to offer a course of antibiotics and anti-inflammatory drugs for next 5 days.

Injection of **Iliren**[®] along with valethamate bromide is the only drugs of choice for such treatment which will facilitate cervical dilatation. In present case, since partial response was noticed after initial treatment, a repeat treatment was given.

The similar case of incomplete cervical dilatations were reported to be successfully treated by Phogat *et al.*, (1994) by using valethamate bromide & dexamethasone and

Sharma *et al.*, (1990) by using valethamate bromide only.

References :

Arthur, G.H. Noakes, D.E. and Pearson, H. (1989). *Veterinary Reproduction and Obstetrics*, **6th Edn.**, *ELBS*, Great Britian. pp 203-204.

Phogat, J.B. Bugalia, N.S. and Gupta, S.L. (1994). *Ind. Vet. J.*, **71**: 1085-1087.

Roberts, S.J. (1971). *Veterinary Obstetrics and Genital diseases*, **2nd Edn.**, *CBS publishers*, Delhi. pp 292-293.

Sharma, G.P. Reddy, V.S.C. and Raju, M.S. (1990). *Ind. Vet. J.*, **67**:581-582.

The promise of the new millennium

Nobilis[®] FAV

Exclusive
Inactivated
vaccine
against

ANGARA
(Leechi or HHS)

Suggested Vaccination Schedule:


In Broilers:
Single vaccine of 0.5 ml between 8 to 15 days of age by s/c or i/m route

In Breeders:
Double vaccine of 0.5 ml at 8 and 16 weeks by s/c or i/m route
* A half dose administration in the second week is recommended for all breeders in very endemic regions.

In Commercial Layers:
Single vaccine of 0.5 ml at least 6 weeks before onset of lay

Note: All vaccination practices have to be decided and implemented by a veterinarian.

Intervet India Pvt. Ltd., Plot No. 41, The Sagar Co-operative Housing Society Ltd.
Road No. 2, Banjara Hills, Hyderabad - 500 034
Ph. : 040-6564401-03, Fax: 040-6564411, e-mail : intervet@hd2.vsnl.net.in



Case Report : Efficacy of Enrofloxacin (Floxin®) in Fracture Healing in Sheep

Syed Sajjad Hussain, B.A. Moulvi, Faizullah Peer and M.R. Fazili

Division of Veterinary Surgery & Radiology, Faculty of Veterinary Sciences & Animal Husbandry, SK University of Agricultural Sciences & Technology(K), Shuhama, Alusteng, Srinagar

Abstract :

Administration of Enrofloxacin (Floxin®) checked the possibility of any infection which otherwise would have delayed compound fracture healing. There was no severe displacement of the bone fragments which facilitated proper apposition and quick healing. The technique followed in the present case, is performed in fractures occurring below elbow and stifle joints as the soft tissue mass is less and the fragments can be easily reduced by simple traction and manipulation.

Introduction :

Fracture is a disruption in the continuity of a bone when subjected to sudden and severe trauma. Fractures of radius & ulna comprise about 20% of all fractures in animals. Direct trauma, automobile accident, infighting or direct hit are the most common causes of fractures in animals. However, it is difficult to predict the type of fracture caused as the amount and direction of force is not known (Tyagi & Singh, 1993). The present case deals with efficacy of enrofloxacin (Floxin® 10% Injection from Intervet India Pvt. Ltd.) in fracture healing of sheep.

Case Report :

A female Corriedale sheep about one year old, weighing 36 kg, was presented to the Division of Surgery & Radiology within 24 hours of severe fall while grazing up a hill. The animal was recumbent. The right fore-leg was soiled with blood clots. A wound (1x2cm) was noticed on the medial aspect of the limb at the fracture

site. The animal was grossly reflective, however, exhibited signs of pain and mild dehydration.

Examination of the affected leg revealed single compound fracture of radial shaft. The ulnar shaft revealed no discontinuity. The surgical intervention was undertaken for repairing the fracture.

Surgical Management :

The animal was tranquilised with Triflupromazine hydrochloride at the dose rate of 1mg/kg intra-muscularly. Brachial plexus was blocked using 2% Lignocaine hydrochloride. The animal was restrained in left lateral recumbency. The affected part was prepared for aseptic surgery in conventional manner. Incision was given longitudinally, one inch on either side of the wound and the fractured site was approached. The reduction was achieved by accentuating the fracture angle and the fracture ends were properly apposed. After reduction, the area was washed with hydrogen peroxide solution and later painted with povidone iodine. Nebasulf powder was dusted on the operative area and the wound was closed by interrupted sutures. Plaster cast was applied over wooden splints enclosing the elbow and knee joints keeping a window on the medial aspect over the suture line.

Post-operatively, 200mg of Enrofloxacin (Floxin® 10% Vet injection from Intervet India Pvt. Ltd.) was administered intra-muscularly for seven days and 50 mg diclofenac sodium intra-muscularly for three days. The suture line was dressed daily with povidone iodine for ten days. The sutures were removed on the 10th

post-operative day and the plaster cast was removed six weeks later.

Result and Discussion:

Isolated fracture of the radial & ulnar shafts occur in non-vehicular injuries such as animal kicks and falls. In this case, an isolated fracture of radius was recorded because of severe fall of the animal. The treatment with cast and splint application coupled with Enrofloxacin (Floxidin® 10% Vet injection from Intervet India Pvt. Ltd.) administration resulted in satisfactory fracture immobilization and healing. This provided stability to the animal to hold his leg. Fracture healing has been one of the most remarkable of all the repair processes in the body and does not result in scar formation but in actual reconstitution of injured tissue in its original form (Mickibber, 1978). Floxidin® (Enrofloxacin) injection checked the possibility

of any further infection which otherwise would have delayed the fracture healing. There was no severe displacement of the bone fragments which facilitated proper apposing and quick healing. The technique followed in the present case, is performed in fractures occurring below elbow and stifle joints as the soft tissue mass is less and the fragments can be easily reduced by simple traction and manipulation (Jean & Hill, 1980).

References :

- Jean, G.S. and Hill, B.L. (1980). *Can. Vet. J.*, **28**:704.
- Mickibber, B. (1978). The Biology of Fracture Healing in Long Bones Joints, Surgery, **60/B**:150.
- Tyagi, R.P.S. and Singh (1993). Ruminants Surgery. *CBS Publication*, Delhi.


Facing the facts

**38% of livestock in india have fallen prey
The rest are under threat
from Reproductive Health Problems**


**PROTECT YOUR PRECIOUS LIVESTOCK
FROM THE HIDDEN ENEMY**

IBRIVAX®
The vaccine against Infectious Bovine Rhinotracheitis

Infectious Bovine Rhinotracheitis (IBR) is a viral disease affecting cows and buffaloes caused by bovine herpesvirus (BHV-1). The disease causes high morbidity in all age groups and even mortality in young animals. IBR is a reproductive infection which causes abortion and infertility in majority of dairy cattle in the country (38%) particularly among crossbred livestock and causes huge economic losses to the dairy farmers. These losses could be significantly high when the semen of infected bulls is used for the inseminations. The economic losses are due to the drop in milk production, cost of treatment for repeat breeding, intruterine medication, loss due to abortion and extra feeding cost during dry period. The only way to control IBR is by preventive vaccination.



**First time
in India**




Special features of Ibrivax®

- Reliable **oil-adjuvant** vaccine.
- Produces **quick and long-lasting (one year) immunity**.
- **Extremely safe** and will not produce disease unlike live vaccines which may sometimes revert back to virulence.
- Antigen (BHV-1) is widely studied and its genome has been well characterized by molecular tools viz. Restriction enzyme analysis, DNA probes, nucleic acid sequencing.
- Produced as per the GMP norms in extremely sterile environment (Class 100 area)

Presentation
Vol of 20 ml (10 doses)

Intervet India Pvt. Ltd., Plot No. 41, The Sagar Co-operative Housing Society Ltd.
Road No. 2, Banjara Hills, Hyderabad - 500 034
Ph. : 040-6564401-03, Fax: 040-6564411, e-mail : intervet@hd2.vsnl.net.in



Case Report : Canine Congenital Cataract Extraction with Intra-ocular Lens Implantation Surgery in a Pup

R.M. Mahajan

Dog & Animal Care Centre, G-12, Shree Ganesh Apartment, 1, Bhagawagar, Dharampeth, Nagpur-440 010, MS

Abstract :

Canine congenital cataract extraction with intra-ocular lenses implantation was successfully carried out in a pup. Post-operative line of treatment was suggested with Gentamicin, Dexamethason followed by Chlormet/Ciplox & Tropicomet eye drops. Three weeks of post-operation, pup was able to see everything.

Case History :

A cross bred pup, aged two and half months old, was brought to the Dog & Animal Care Centre, Nagpur with the history that pup was dashing against wall and furniture. On clinical examination, white opacity in both eyes was seen. Appetite was normal. Cornea and conjunctiva was normal in both the eyes. White mature cataract was seen in both the eyes. Blood sugar and general health condition was normal.

Pre-operative antibiotic eye drops, four times a day and mydriatic drops three times, in half hour before surgery were used. Surgery was performed under general anaesthesia. Cleaning around the eye and drapping was done as usual. Eyelids were separated by lid speculum and suture was put on superior rectus muscle to give proper exposure to the eye ball, Palpebral conjunctival flap was made on the drosal side. Now corneal incision was

made on dorsae side from ten to one o'clock position. The anterior chamber reformed with visco-elastic substance. The anterior capsulotomy done with cystitome. There was no nucleus. Loose cortex was aspirated out with simcoe irrigation aspiration canula. Irrigation was done with ringers lactate. Capsular bag was filled with visco elastic substance. Then intra-ocular lens of single piece PMMA having 12 mm length and 30.5 diopter power was implanted in the capsular bag. Anterior chamber was washed with riger lactate and aspirated out remaining visco-elastic substance with ringers lactate. Then anterior chamber was formed with reingers lactae and corneal wound was closed with 9/0 (eithlon) contineous suture. Sub-conjunctival injection of dexamithasone and gentamicin was given. Ciplox eye ointment was put in the conjunctival sac and sterile pad and bandages was done. The whole surgery was performed under ophthalmic operating microscope.

Post-operative treatment was advised with injections of gentamycin and dexamethason (in tapering dose). This was followed by chlromet-DM and Ciplox eye drops four times daily. Also tropicomet plus eye drop was prescribed BID. Three weeks later pup was able to see everything without any complication. Subsequently a gap of four weeks, similar surgery was performed on the second eye with success.

" Breed is stronger then pasture "

- George Fliot

" The author himself is the best judge for his performance "

- Gibbon

Case Report : Peritoneal Dialysis in Case of Acute Tubular Necrosis in a Dog

R.M. Mahajan

Dog & Animal Care Centre, G-12, Shree Ganesh Apartment, 1, Bhagawagar, Dharampath, Nagpur-440 010, MS

Abstract :

Dialysis does not replace failed endocrine or metabolic function of kidneys. Peritoneal dialysis has emerged as the most practical form of dialysis and has established its importance in external purification of blood in humans as well as in canines and effective in acute cases. Haemodialysis is more efficient than peritoneal dialysis in the removal of low molecule weight substance from blood.

Introduction :

The effect of tubular necrosis is to cause blockage of the lumen as a result of desquamation of the necrotic cells. This results in incision or reduction of glomerular filtration (anuria or oliguria) and in cessation of tubular function distal to the site of blockage. In this study, an attempt was made to observe the efficiency of regular treatment along with peritoneal dialysis in restoring altered biochemical parameters and to correct the acute tubular nephritis

Case Report :

A spitz dog aged about 8 years, brought to the clinic, was dull, drowsy and had total inappetence, Body temperature was 102°F and showed polydipsia, oliguria and vomited frequently along with respiratory distress. On serum and urine analysis, report showed, Albumin ++< pus cells also seen occasionally along with R.B.C. was 8-10 /hpf, serum urea-107 mg/dl, serum creatinin-4.58 mg/dl, sodium-146 mg/lit. Potassium 4.5 meq/L, SGPT-22u/lit, Hb-11.69 g. On ultra-sonography examination

of kidney shows normal shape, size, position and cortico Jmedullary ratio. Right kidney measures 6.2x2.7 cm, left kidney measures 6.4 x 2.9 cm and no evidence of calculus, hydro-nephrosis or thinning of cortex. No demonstrable abnormality detected in ultrasonography examination of the both kidneys. On histo-pathology Graoos examination 1.5 cms long piece of needle biopsy mounted on the paper. On histological examinations. Section shows adequate renal biopsy including 11 glomeruli. Glomeruli appear normo-cellular with minimal inflammatory in filtrate. Tubules shows loss of epithelium at many places, shows edema and necrosis. Stroma shows edema and focal mixed inflammatory infiltrate. This indicate acute tabular necrosis.

The treatment involved a dwell time of half an hour during 8 exchanges per day of 500ml dialysate. Dsialysate was infused through PD (Periotonial dialysis) catheter and drained with i.v. set, which was attached to the uro bag through 3 ways (disofix -3). The PD catheter was inserted two inches cranial to the umbilicus over *midline linea alba*. Dialysis in the above case was continued for 3 days. On the first day, after eight cycle, urea from 107 mg/dl came down 70 mg/dl and serum creatinine concentrating from 4.58 mg/dl to 2.39 mg/dl and Na-125 meq/lit to 127 meq/lit and potassium from 3.1 meq/lit to 3.5 meq/lit On the second day urea and creatinine concentration further declined from 70 mg/dl. to 30 mg/dl and 2.39 mg/dl to 1.8 mg/dl respectively. On the same day sodium and potassium values changed from 127 mq/lit to 132 meq/lit and 3.5 meq/lit to 3.9 meq/lit respectively. On the third day at

end of eight cycle of dialysate, urea concentration reduced from 30mg/dl to 20 mg/dl and creatinine concentration from 1.8mg/dl to 1.4 mg/dl. The sodium and potassium values were 1.38 meq/lit and 4.0 meq/lit respectively which are more or less normal. Injection of xylocain 2%, 2ml along with injection of Heparine, 500 IU was added into PD solution of one litre to avoid pain and blood clotting respectively.

Line of treatment apart from dialysis done was, injections of Dextrose 10% and cefotaxim, BD x 4 days and injection of Lasix 20 mg i.v. (once only). A course of vitamin B complex was also advised. On the second and third day, dialysis was repeated and there was no significant change in above values.

Dialysis was continued until renal function was returned to normal (i.e. value of urea and creatinine). Serum potassium and serum sodium value did not change significantly. Increase in urea level during initial stage might be due to reduced glomerular filtration rate. In this investigation, an attempt had been made to assess the efficiency of the treatment along with peritoneal dialysis in restoring altered biochemical parameters and to correct the acute tubular nephritis. The treatment during investigation was aimed at regeneration of patient with 10% dextrose. In order to reduce increased value of urea and creatinin aslo and to give rest to the kidney for regeneration, dialysis was performed. To check the infection, was given. The treatment with peritoneal dialysis was selected because it was reported to help in extracting toxic products viz. BUN and K+. Along with these injection of

Cetatoxim toxic products some other mysterious substances of nitrogenous nature of proteinmetabolism might have been removed.

Reference :

Grollman, A, L.B. Turner and J.A. Mclean (1951). *Arch. Int. Med.*, **87** : pp379-390.

Ganesh, T. J. Sureshchandra and M.C. Thandaveshwar (1981). *Ind. Vet. J.*, **58** : pp 823-826.

Jackson, R.F. (1964). *Vet. Rec.*, **76** : pp 1481-1486.

Jubb, K.V.F.P.C. kennady (1970). "Pertoneal drainage:". In : Pathology of domestic animals. **2nd Edn. Academic Press**, New York. PP 280.

Markowitz, J.J. Archibald and H.G. Downie (1964). Shock and exprimental peitonitis. In *Experimental Surgery. 5th Edn. The williams and Wilkins Company*, Baltimore. P.P. 208-235.

Osborne C.A., D.G. Low and D.R. Finco (1972). Renal function tests. In (anine and feline urology. **1st Edn. W.B. Sounders Company**, Philadelphia. pp 73.88.

Ray, A.K. and J. Mohanty (1973). *Ouat J. Res.*, **3** : PP97-100.

Simonian, Kirril (1975). In traperitoneal dialysis In : peritontis, **1st Edn. Mir Publications-Masco.**, PP 252-257.

Wing, A.J. and Magowan Mary (1975). Renal function. In the renal unit. **1st Edn. The Mzcmillan press ltd.**, Landon and Basingstoke.pp 4.

*"Lack of money is no obstacle.
Lack of an idea is an obstacle."*

- Ken Hakuta

News



Dr. B. J. Patel

DR. B.J.PATEL HONOURED WITH THREE AWARDS

Dr. B.J. Patel, Asstt. Professor, Department of Pathology, College of Veterinary Science & A.H., Gujarat Agricultural University, Sardar Krushinagar has been honoured by **INDIAN ASSOCIATION OF VETERINARY PATHOLOGISTS (IAVP) IN ASSOCIATION WITH VARSHA MULTITECH, BANGALORE** for his outstanding contribution in Veterinary Pathology at the XVIII Annual Conference of IAVP, held at college of Veterinary Science and Animal Husbandry, Gujarat Agricultural University, during 11-13 October, 2001. The award carries as silver plaque and a citation. Dr. Patel received this award for his research work on 'Clinico-pathomorphological, immuno-toxicological and ultra-structural studies on cypermethrin toxicity in calves with special reference to its diagnostic profiles', under the able guidance of Dr. S.P. Singh, Professor and Head, Department of Pathology, College of Veterinary Science, Pantnagar.

He also honoured with "**SAVITREE JIBACHCH SINHA AWARD 2001**" for the best poster presentation on the topic "Experimental cypermethrin toxicity in crossbred calves" and **Dr. K.S. NAIR MEMORIAL AWARD AND MEDAL** for the year 1998 for the best research article in virology entitled "Isolation of Canine Parvovirus from clinical cases of gastroenteritis" published in the Ind. Vet. J., June, 1998, Vol 75 (6), pp 498-500.

"It is more religious and more relevant to believe in the work of the deity than comprehend them"

- Tacitus

"A deaf husband and a blind wife are always a happy couple"

- Proverb

News**High Consumption of Chicken Meat vs Heart Ailment in India.**

This is to discuss here in reference to the scientific talk by Dr. B.P. Pandey, at the second World Heart day celebration at Kolkata. Dr. Pandey is an international famed cardiologist. During his lecture in the above said conference, he referred that the high consumption of chicken meat is the number one enemy of heart ailment. The same was appeared in PTI news. The talk was very much informative. As a poultry pathologist the undersigned would like to mentioned few points here on the high consumption of chicken meat vs heart ailment in India.

In India, poultry industries has taken 50 years to reach to the present status. There was no technical know-how available to start with. The poultry farmer and Veterinarians have taken lot of strain to bring the poultry industries to the present status to produce cheap poultry meat and other products as a source of animal protein.

During the year 2001, nearly 41600 million chicken were slaughter world wide showing a 50% increase as against 27130 millions killed during 1990. This phenomenal growth in total poultry meat has been influenced by behaviour, which shows clear preference for poultry over other meat. (Ted Gllin, 2001). India has achieved a growth rate of 10% in eggs and 20% in broiler meat production.

The chicken meat is mostly and widely accepted meat in India. The most valuable part of broiler carcass is the breast meat. It bears low fat content (Charles Veerkamp', corpieters & Ina Hus Lsegger, 1997).

There is a great concern among American public for reducing problems of saturated fatty acids and cholesterol in their diet. It is possible that poultry meat is product with reduce dietary levels of cholesterol (Dr. Peter Haston, 1997). Water Willett, MD, Faculty Member at Harvard University has developed "Healthy eating Pyramid", which encourages the consumption of poultry meat more than red meat. Red meat is rich saturated fat and cholesterol, whereas the chicken and turkey meat is less in saturated fat and hence, it is advised to the heart patient.

The public has become highly aware of the presence of fat in diet and heart diseases, but many of the consumers do not know the difference between good and bad fat. Certain good fats, such as conjugated lenolic acid (CLA) and Omega 3-fatty acid are beneficial for good health. It has been shown infact, that CLA inhibit carcinogenesis and inhibit cholesterol induced athrosclerosis in rabbits.

Dr. A. Leaf, consultant from the Massachusetts General Hospital is of the opinion that eggs with extra unsaturated fatty acids actually inhibit heart attack in progress (personnal communication). This is mainly dependent upon poly unsaturated fatty acids (PUFAS).

News

Dr. Lands from NIAA Bethesda, The USA, was of the opinion that among two types of Omega free fatty acids (FFA) Omega-3 FFA is good than Omega-6 FFA (personnel communication).

Transfatty acids such as those are obtained from processed food and food, cooked in oil, causes most of the problems, associated with fat syndrome.

Dr. Kamiski admitted before his talk that six years ago he was not eating eggs, calling them suicidal pills, but now he is recommending eggs to his patients at risk, a minimum of 2 eggs per day. (Personal Communication)

The highest consumptions of eggs by Japanese has the longest life span and lowest evidence of vascular heart disease (VAD), which might be due to higher ration of 3 FFA to 6 FFA. (Marityn A. Coleman, 1998).

During the IInd International symposium on eggs and nutrition held in Canada, David Kriech Evsy, (the author of the book on 'cholesterol') stated that there is no simple relationship with any single item, influencing heart diseases.

The Americal Heart Association has stated that eggs are fairly low in saturated fat and total fat and no cholesterol. Thus, Ronald M. Krausl (2001) has emphasised on the over all eating plan is to be understood by the consumer. Eggs are not a major dietary risk factor for heart diseases.

All the items in the vegetarian food is not free from Mycotoxin Pesticidal and anti-nutritional substances and hence they cause health hazard also.

Dr. S. M. Mohiuddin

B.V.Sc., M.V.Sc., Ph. D. (Path.)

Head, Deptt. of Pathology (Retd.)

College of Veterinary Science,

Hyderabad

Contact Address :

Plot No. 76, Road No. 10

Gaffar Khan Colony,

Banjara Hills, Hyderabad - 500 034.

Tel. No. 040 - 3392736

"Most people would succeed in small things if they were not troubled with great ambitions."

- Long fellow

ABSTRACTS:**1. Morphologic Observations on Respiratory Tracts of Chickens after Hatchery Infectious Bronchitis Vaccination and Formaldehyde Fumigation.**

A.M. Di Matteo, M.C. Sofiez, C.M. Plano and I. Von Lawzewitch
Faculty of Clinical Veterinary, Argentina

The histologic changes in the respiratory tracts of chickens were evaluated after hatchery fumigation with 40% formaldehyde vapors and vaccination against infectious bronchitis virus with live attenuated vaccine (Massachusetts serotype).

One-day-old chickens were housed in four isolation units in controlled environmental conditions, fed and watered ad libitum, and separated into four groups: 1) fumigated and vaccinated birds (FV group); 2) nonfumigated and vaccinated birds (NFV group); 3) fumigated and nonvaccinated birds (FNV group); and 4) control group (C group). All birds were tested to be free from *Mycoplasma gallisepticum* and *Mycoplasma Synoviae*. After necropsy on the first, eighth and twenty-sixth days after birth, samples from tracheal upper portion and lungs were conventionally processed for light, scanning and transmission electron microscopy. Tissue response was monitored by microscopic examination of trachea and lung. On the first day of observation, fumigated and vaccinated birds (FV group) showed extensively damaged tracheal epithelium with exfoliated areas and some active glands with electron-dense granules, and in the lung, the primary bronchi epithelium had disorganized cilia and abundant lymphocytes with emphysematous areas in tertiary bronchus. On day 8 after vaccination, cubical and cylindrical tracheal cell proliferation was observed, and on day 26, ciliated columnar epithelium was almost regenerated with heterophilic infiltration, and hyaline cartilage nodules appeared in parabronchi. The nonfumigated and vaccinated birds (NFV) revealed less injury on the epithelial surface and a more rapid response to epithelial regeneration than the only fumigated animals (FNV). The control group did not show remarkable morphologic changes. Postvaccinal and fumigation effects on the upper respiratory tract were temporary, whereas in lungs, increased emphysema, cartilage nodules in the interchange zone, and general lymphocyte infiltration has caused intensive injury.

2. A Comparative Study of the Pathogenesis of Malabsorption Syndrome in Broilers

Th. Songserm, J.M.A. Pol, D. van Roozelaar, G.L. Kok, F. Wagenaar and A.A.H.M. ter Huurne (2000). *Avian Dis.*, 44: 556-567.

ABSTRACTS

Five Malabsorption syndrome (MAS) homogenates from The Netherlands and Germany were used to reproduce MAS in broilers. We studied the histopathology after inoculation of 1-day-old broiler chicks and the agents that might be involved. Generally, the MAS homogenated induced signs that differed in severity and pathobiology. We could distinguish and classify the inoculated groups best by histopathology: proventriculitis, lesions in the small intestines in combination with proventriculitis, or lesions of the small intestines only. Lesions in the small intestine had more impact on weight gain depression than lesions in proventriculus. In three out of five inoculated groups, microscopic lesions of the pancreas were found. Reovirus was detected in the inoculated groups by virus isolation and seroconversion, and reviral antigen was detected by immunohistochemistry of the small intestine. Also, enterovirus like particles were detected in three of the five inoculated groups, although not in the most affected group. Additionally, bacteriophages and bacterial (hemolytic *Escherichia coli*, *Pasteurella hemolytica*, and *Enterococcus durans*) were isolated from inoculated chicks. The role these agents play in pathogenesis of MAS is still unsolved.

3. Evaluation of Chicken Infectious Anemia Virus and Associated Risk Factors with Disease and Production Losses in Broilers

Lunn T. Hagood, Tamara F. Kelly, James C. Wright and Frederic J. Hoerr (2000). *Avian Dis.*, 44: 803-808

A case-control study was performed to determine the significance of chicken infectious anemia virus (CIAV) as a risk factor associated with secondary disease in commercial broilers and to identify the significance of production losses associated with CIAV. The study also examined the relationship between bursal and thymic atrophy and the presence of CIAV. Cases were defined as submissions to Alabama Veterinary Diagnostic Laboratories with a history of clinical disease and with a diagnosis of coccidiosis, gangrenous dermatitis, or respiratory disease. Controls were selected from submissions with neither a history of disease nor evidence of disease on necropsy. CIAV was detected in fresh tissues by polymerase chain reaction. Both thymic atrophy and the detection of CIAV were significantly associated with a disease case ($p < 0.05$). Bursal atrophy was a significant risk factor associated with disease cases that showed production losses in both percentage of livability and percentage of condemnations ($p < 0.05$), detection of CIAV alone was not associated with detectable losses in production or flock performance.

ABSTRACTS

4. Avian Leukosis Virus Subgroup J Infection Profiles in Broiler Breeder Chickens : Association with Virus Transmission to Progeny

R. L. Witter, L. D. Bacon, H.D. Hunt, R.F. Silva and A. M. Fadly (2000) Avian Dis., 44 :913-931

Profiles of infection with avian leukosis virus subgroup J (ALV-J) and factors that predict virus transmission to progeny were studied. Eggs from an infected broiler breeder flock were hatched at the laboratory. The flock was reared in a floor pen, transferred to laying cages at 22 wk, and inseminated to produce fertile eggs. A cohort of 139 chickens was tested at frequent intervals over a 62-wk period for virus, viral antigens, or antibodies in plasma, cloacal swabs, eggs albumen, and embryos. Virus was detected in 7% of chicks at hatch but spread rapidly so that virtually all chicks became infected between 2 and 8 wk of age. Mortality due to myeloid leukosis and related tumors was 22%. Over 40% of the chicks developed persistent infections, whereas the remainder experienced transient infections. Five types of infection profiles were recognized. Novel responses included hens that were positive for virus intermittently or started late in life to shed viral antigens into the cloaca ALV-J was isolated from 6% of 1036 embryos evaluated between 26 and 62 wk. However, over 90% of the virus-positive embryos were produced between 29 and 34 wk of age. Of 80 hens that produced embryos, 21 produced at least one infected embryo and were identified as transmitters. All but one transmitter hen would have been detected by a combination of viremia, cloacal swab, and albumen tests conducted between 18 and 26 wk. However, virus was transmitted to embryos from hens that were not persistently viremic or that rarely shed viral group-specific antigen into the albumen of their eggs. Intermittent patterns of both antigen shedding and virus transmission to embryos were observed in some hens. These results validate current screening procedures to identify potential transmitter hens and provide some suggestions for improvement but also show that identification of all transmitter hens by such procedures is unlikely. Thus, eradication programs based solely on dam testing may be less effective than those where dam testing is combined with procedures to mitigate early horizontal transmission in progeny chicks.

" The difference between what we do and what we are capable of doing would solve most of the world's problems."

-Mahatma Gandhi

Comments / Suggestion on 'The Blue Cross Book' - 18 and Expected Articles for 'The Blue Cross Book' - 20

1. **Dr. P.R. Pandey**
(Tel.No.02622-24531)
Manager, SUMUL Feed Factory, "Rameshwaram", H.B. Park, Shastri Road, Bardoli, Surat-394 602
"I liked the article 'On Unique Programme for Improvement of Animal Health and Productivity through Eradication of Ecto-parasitism in Deoni Tract'. We will keep same programme for Ecto- and Endo-parasitism for SURAT District in July'02. I would like to publish for effectiveness on 'Clovax® vaccine' in my area as 'NO FMD OUTBREAK' since last 3 years."
2. **Dr. Rachhpal Singh**
(Tel.No.01883-47386)
Veterinary Officer & In-charge, Civil Veterinary Hospital, Dist.- Hajipur, Hoshiarpur-144 221
"Radial Nerve Paralysis in a Bullock', 'Successful Treatment of Babesia equi Infection in a Stallion' are commendable but article 'On Unique Programme for Improvement of Animal Health and Productivity through Eradication of Ecto-parasitism in Deoni Tract' can be a trend setter as congestion and over-population has resulted in menace of both Endo- and Ecto-parasitism."
3. **Dr. C.B. Mishra**
(Tel.No.06272-24955)
New Gangasagar, P.O. Lalbagh, Darbhanga-846 004, Bihar
"The article 'Radial Nerve Paralysis in a Bullock' was very useful for field veterinarians. Abstract of 'Biotin for high Producing Dairy Cows' was very useful. I will be sending an article on 'Efficacy of Floxidin® Injection in Mucoïd Diarrhoea'."
4. **Dr. Nalin Sharma**
(Tel.No.0771-262108)
H-II/54, Sector-4, Pt. Deen Dayal Upadhaya Nagar, Raipur-492 010, CG
"Article entitled, 'Effect of Fertagyl®, Gonadotrophin Releasing Hormone (GnRH), Administration on Conception Rate in Repeat Breeding Cows' is very useful and beneficial for breeding. News and abstract keeps in touch with latest happenings in our country and abroad. An article on 'Photo-sensitization in cross-bred cow and its treatment' will be submitted shortly."
5. **Dr. Debdatta Ray**
(Tel.No.0581-538556)
Senior Scientist, Department of Parasitology, IVRI, Izatnagar, Bareilly-243 122, UP
"Lot of thanks for sending the issue No. 18. It is highly informative, interesting and useful for veterinarians of every sectors. I will be sending a paper on 'Xenodiagnosis of bovine Fasciolosis Babesiosis' shortly."

READERS' COLUMN

6. Dr. S.K. Mukherjee

(Tel.No.0761-408102)

Assistant Professor, Department of Animal Nutrition, College of Veterinary Science and AH, Jabalpur, MP

"I had borrowed above said issue to study from my college and find 'Mimosine Toxicity in Animals', 'Radial Nerve Paralysis in a Bullock' and abstracts are useful for me as well as for my students."

7. Dr. S. Singh

Government Veterinary Hospital, Near Bus Stand, Raigarh, MP

"Name published in 'Reader's Column' is helpful for veterinarians from the other state for interaction; exchanging technical views. In the same way, I have received letter from doctor, presently posted in Andhra Pradesh."

8. Dr. M.U. Siddiqui

(Tel.No.05311-74722/75589)

General Manager, Animal Breeding Centre, P.B.No.1, Salon-229 127, Dist.- Rae Bareli, UP

"The research article on 'Effect of **Fertagyl**[®], Gonadotrophin Releasing Hormone (GnRH), Administration on Conception Rate in Repeat Breeding Cows' is quite practical and would surely help field vets in tackling repeat breeding problem to some extent. Please publish more article on breeding problems. The journal has improved a lot over a period of time. Still sporadic spelling mistakes are noticed."

9. Dr. R. Balagopal

(Tel.No.0422-43122, Ext. 212)

Associate Professor and Head, Department of Animal Husbandry, TNAUVAS, Coimbatore-641 003, Chennai

"Mimosine Toxicity in Animals' is an excellent article, related to field conditions. Level of inclusion as fresh matter basis could have been dealt within the article, so that field veterinarians can suggest level of inclusion and also for different species of animals."

10. Dr. R.N. Kohli

(Tel.No.011-6896911)

Retd. Professor & Head, Punjab Agricultural University

Present Address : 922, Sector-A, Pocket-B/C, Vasant Kunj, New-Delhi-110 070

"I would suggest that the prospective authors should be careful in citing the earlier publications correctly and giving due credit to their authors for reasons of authenticity that the future workers deserve. Sorry for delay in sending the article on 'Ventricular Septal Abscess' due to delay in the receipt of photographs from Iran."

11. Dr. Milan Kumar Das

Village, P.O. Dakshinchangha Chak, Dist.-Midnapore, WB

"Thank you for mailing *'The Blue Cross Book'*-18 issue. Being a nutritionist, the article 'Mimosine Toxicity in Animals' is very much informative, attractive and praiseworthy in the present context. Please try to publish the article on 'Zoo and Wild Animal Nutrition'."

12. Dr. Prodyot Kumar Paul

(Tel.No.033-4945034)

44/2/B, Kalipada Mukharjee Road, Kolkata - 700 008, WB

"It is ably opined in the editorial column of the 18th issue that - '*Proper care to control diseases and prophylactic vaccination of the quality animals*', will be utmost important to enhance high production from the quality animals resulted through the implementation of restructuring of the breeding operation in coming years."

13. Dr. N.M. Markandeya

(Tel.No.02385-56630/57448)

Associate Professor, Veterinary Medical College, Udgir-413 517

"*'The Blue Cross Book'* is a effective link between problems oriented research and it's field applications. Usually clinical articles are more useful and informative."

14. Dr. Rupali A. Singru

Livstock Development Officer, Regional Joint Director's Office, Khadki, Pune Region, Pune-400 003, MS

"Accept my heartiest congratulations on the wonderful and extremely informative articles in the issue No.18. 'Mimosine Toxicity in Animals' and the case report on 'Bovine Conjoined Twins' were impressive. I would like to send an article entitled 'Molecular Characterization of Buffalo Breeds using RAPD-PCR technique', based on Molecular genetics."

15. Dr. Mohd. Rasid

(Tel.No.0191-591075)

Veterinary Clinic Chinore, R/o. Chinore, A/2-13, P/o Roop Nagar, Jammu-180013

"Many thanks for sending the issue No.18. No doubt *'The Blue Cross Book'* is very informative but in my opinion some more review articles should get space in the publication so that awareness among the farmers and common literate persons be created. I will be sending a case report, entitled, 'Pseudo-pox in cow affecting milker in Jammu'."

16. Dr. S.K. Singh

(Tel.No.0542-581575)

Dog Care Centre, S.9/285, B Naibasti, Pandeypur, Varanasi - 221002, UP

"Lot of thanks for sending the issue No.18. I feel the dairy animal wear suffering was major problems in infertility. So I treated with **Receptal**[®], **Iliren**[®], **Folligon**[®] and **Chorulon**[®]. Publication here on detail on usage of **Chorulon**[®] for different reproduction disorder, is an excellent and highly informative study for all veterinarians.

17. Dr. D.B. Sarode

(Tel.No.0712-521391)

Principal Investigator (Wild Life Health), Professor & Head, Medicine, Maharashtra Animal & Fishery Science University, Veterinary College, Nagpur-440 006, MS

"Thanks for the issue No. 18. Infact the importance to field oriented articles are observed in this issue carrying useful information to field veterinarians. If desired, the review and research articles on wild life medicine can be furnished in the interest of veterinarians and scientist in the field of wild life.

18. Dr. M.V.G. Ahobalarao

(Tel.No.08644-58281-85)

Manager Training Centre, Sangam Dairy, Vadlamudi-522 213

"Article on 'Mimosine Toxicity in Animals', and Clinical article on 'Radial Nerve Paralysis in a Bullock' and 'Post-partum Uterine Prolapse in Madras Red Sheep' are quite informative, coloured photographs of 'Bovine Conjoined Twins' are very impressive. Articles on pollution effect on livestock may be invited from urban veterinarians."

19. Dr. K.R.V. Praveen

(Tel.No.08512-56957)

Veterinary Assistant Surgeon, H.No.12/254, Yemmiganur, Dist. Kurnool-518 360, AP

"Thank you very much for sending me a copy of '**The Blue Cross Book**'. I am impressed by the article regarding 'Radial Paralysis in Bullock'. I would suggest that more of surgery cases may kindly be published. It provides latest information in veterinary surgery and valuable information for cattle practitioners."

20. Dr. Jaydip S. Mulik

(Tel.No.02347-74171)

'Shamdeep', Khanapur Road, Hanmantnagar, Vita-415 311, Tal. Khanapur, Dist.-Sangli, Maharashtra.

"Last time, I have suggested that in every issue you give atleast important notes on one breed of dog along with color photograph. Because many veterinarians are unable to identify the breed of dog and cat (specially foreign breeds). So please, look after this suggestion."

GUIDELINES TO CONTRIBUTORS

"*The Blue Cross Book*" is published biannually. The contributions to the journal are accepted in the form of invited review articles, research articles (clinical / field studies), case reports, other information pertaining to animal health and production. The decision of the Editorial Board members will be final regarding acceptance of the article for publication. The manuscript should be typed on one side of the paper with double spacing except for footnotes and references for which single spacing be used. The style of reference citing should be strictly followed as shown below. The words to be printed in italics should be underlined. The manuscript should be arranged in the following order:

- Title** : Note on the Outbreak of Pox in Sheep
- Name/s of author/s** : K. Kumari, P.C. Chowdhri and P.K. Das
- Place of work** : Department of Pharmacology, Bombay Veterinary College, Parel, Mumbai-400 012, MS
- Materials and Methods** : In details.
- Results and Discussions** : With the help of tables/ figures etc.
- Reference/s** : For Periodical/s : Surname/s and initials/s of author/s, year of publication in parenthesis, abbreviated title of journal (*italic*), volume number (**Bold**), first and last page number/s.
- e.g. Chhabra, D., Moghe, M.N. and Tiwari, S.K. (1996). *Ind. Vet. J.*, **82**, **PP**: 1-3.
- : **For Books** : Name/s of author/s, year of publication in parenthesis, title of the book, edition (**Bold**), name of publishers (*Italic*) and place.
- Radostits, O.M., Blood, D.C. and Gray, C.C. (1994). *Veterinary Medicine, 8th Edn., English Language Book Society (ELBS)*, London
- Tables and Figures** : Tables are to be numbered in Roman numbers (I, II and so on). Each table should have a clear title. Figures should be of good quality and numbered in Arabic numbers (1, 2, 3 and so on).

For clinical articles and short communications, these should not exceed four typed pages. For case reports, history, observation, tentative and confirmatory diagnosis, line of treatment and follow up on the case should be given.

Authors are requested to confirm that the paper has not been published elsewhere and also to indicate details of postal address for communication along with telephone/fax number with STD code etc.

We would appreciate if you kindly send us your manuscript (technical article) in Word File either by floppy disc or by e-mail : adatta@intervetindia.com, anupkdatta@yahoo.co.in

All manuscripts should be mailed to the following address :

Dr. Anup K. Datta, Editor, "*The Blue Cross Book*", Intervet India Pvt. Ltd., Briahnagar, Off Pune-Nagar Road, Wagholi - 412207, Dist. - Pune, Tel. (Direct) : +91-20-27051811, Fax : +91-20-27050859
E-mail : adatta@intervetindia.com, anupkdatta@yahoo.co.in



Research Makes the Difference

Intervet India Pvt. Ltd.

Briahnagar, Off Pune - Nagar Road,
Wagholi - 412207, Dist. Pune.

Tel.: +91-20-7051800-803, Tel. (Direct) : +91-20-7051811, Fax : +91-20-7051805
E-mail : adatta@intervetindia.com