



Efforts of Medical Practitioners and Veterinarians to prevent spread of Cutaneous Leishmaniasis detected in Thiruvananthapuram: United



Anamala Tribal Settlement Colony at Neyyar Forest

Common hosts are domestic and feral dogs, rodents, foxes, jackals, wolves, raccoon-dogs, and hyaenas. In visceral leishmaniasis caused by *Leishmania donovani* does not appear to have an animal reservoir and is thought to be transmitted via human-sandfly-human interaction. An animal reservoir for cutaneous leishmaniasis caused by *Leishmania tropica* has not been identified, although it has been found in some dogs in endemic areas.

Pathogenesis of leishmaniasis is due to an immune reaction to the organism, particularly cell mediated immunity. Laboratory examination reveals a marked leukopenia with relative monocytosis and lymphocytosis, and

Cutaneous leishmaniasis was detected in humans in the Anamala tribal settlement in Neyyar forest, Thiruvananthapuram. In Kerala, leishmaniasis is almost considered an exotic disease. Now this disease too is emerging in the capital. Dr. Jacob Alexander and Dr. Arun George visited the settlement along with the team of doctors from the Department of Preventive Medicine, Medical College, Thiruvananthapuram on 2-3-09 to assess the role of animals in spreading cutaneous leishmaniasis in the colony. Biotechnological tools are being employed under the leadership of Dr. E. Sreekumar in identifying the species.

Leishmaniasis is a vector-borne disease that is transmitted by sandflies and caused by protozoa of the genus *Leishmania*. They are transmitted to mammals via the bite of the female sandfly. Humans are generally considered incidental hosts.



Skin lesions of Leishmaniasis

Leishmaniasis in humans can be divided into cutaneous, mucocutaneous, visceral, and viscerotropic forms. For most species of leishmania, an animal reservoir is required for the parasite to persist. Infections in wild animals are usually not pathogenic, with the exception of dogs which may be severely affected. Cutaneous leishmaniasis in canines are skin lesions, while in humans it is either localized or progressive with decreased appetite, epistaxis and kidney lesions.

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AT THE PRESIDENT'S DESK



While we are getting ready to release the third issue of this newsletter, our country is preparing for a long process and action for upholding traditions and protecting the highly valued national democratic principles. The country has a unique vision and concept in protecting national integrity, unity, secularism under the democratic

umbrella. While many other countries which became independent along with ours, or even afterwards, have lost the peoples' governments and have not been able to function democratically, India has so far proved our desire for unity and democracy. We feel oneness in spite of diversity in many aspects. The country is preparing for the 15th election to the Lok Sabha to constitute a parliament as per constitution.

Being educated, and professionals working for the society, the veterinarians have to uphold the law of the land and play our role as citizens enjoying fundamental rights. Think freely and vote with conscience for the future of the country. Never surrender ideologies and thinking. Let us discharge the rights and responsibilities entrusted to us without fear. Let us hope that the newly constituted parliament will act fairly and bring laurels to the nation by way of development and consideration to all.

In the profession we will continue as one with full allegiance to the veterinarians' oath. We know the strengths and the weaknesses of the profession. Let us work together for progress associating ourselves with the plans and programmes of the new government coming in the centre and utilising the resources for the professional and common interest.

I would also like to remind all concerned that without proper planning and implementation we cannot satisfy the expectations of the society. Officers responsible for implementation of plan 2008-2009 surely are relaxing after tedious work in March to achieve targets. May I Congratulate you all for the good work done. It is also time for us to think of variety in designing useful and practical projects for 2009-2010, The associations also have taken some initiatives to help the veterinarians to dream of better projects, There is no time for us to relax; let us dedicate ourselves and plan for a social change with a more important role for Animal Husbandry Sector and not reducing the role of Veterinary Sciences. Wish you all success in the new financial year.

A.P.S.NAIR

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mia and thrombocytopenia. IgM and IgG levels are extremely elevated due to both specific antibodies and polyclonal activation.

Diagnosis is based on the symptoms and isolation of the organisms from the lesion impression, aspirate or biopsy, by direct examination or culture. A skin test -delayed hypersensitivity and detection of anti-leishmanial antibodies by immuno-fluorescence are indicative of exposure.

Infertility, food security and food safety:

Last month the IVA requested our office bearers to conduct discussions regarding food security in all districts, and to forward drafts of their suggestions. Some districts have responded rightly. In this context we would like to bring everyone's attention to another study which was conducted in 2005 and to its recommendations as this has a serious bearing the issue.

Dr. Ibrahimkutty Assistant Professor, presently on leave, Department of Animal Reproduction, COVAS, Mannuthy was authorised to conduct a study on "*Investigation of current situation and remedial measures for infertility conditions among crossbred cattle in Kerala*" by the Government of Kerala. He submitted his report through Kerala Agriculture University in March 2005. He has pointed out that it is high time to realize that trying to increase the production potential beyond certain level is not going to help any more. Effectiveness of fertility management should be the major concern for further improvement of milk production in the state. His recommendations which remain on paper are given below:

1. Immediate measures have to be taken to ensure semen of satisfactory quality and quantity available for insemination with emphasis on initial quality and handling.
2. Reproductive management practices and recommendations have to be subjected to timely modifications needed, if any. Recommendations on time and site of A.I. and thawing temperature need immediate attention.
3. Considering the increased and increasing incidence of prolonged heat, oestrous aberrations and reproductive tract infections, number of sperms per dose has to be increased to facilitate mid cervix insemination so as to extend sperm availability and to minimize chance of infection.
4. Besides the training to deposit the semen, competency to confirm the heat and to assess the structural and functional normality of reproductive organs in animals through palpation has to be fixed as the basic criteria for inseminators as necessitated by the changed context.
5. Periodic evaluation and retaining of A. I. workers has to be carried out on a continuous basis, with all

Cont.. Page 3

Control measures involve vector control and avoidance. Immunization has not been effective.

In areas where the known vector is a sandfly an deltamethrin collars worn by the dog has been proven to be of some effect. The sandfly is most active at dusk and dawn, keeping dog indoors during those peak times will help minimize exposure.

With the increase in international travel, immigration, and HIV co-infection, leishmaniasis is becoming more prevalent.

possible effort to ensure effective training.

6. Suitable operational research efforts have to be taken up on a continuous basis to evaluate the performance of ongoing A. I. programme.
7. Improvement of reproductive performance has to be given more stress in the breeding policy and programme rather than the genetic improvement alone.
8. Considering the vivid biological roles of males in the herd, and consequences of its absence, consideration has to be given to ensure male animals without affecting the breeding policy in a major way.
9. Considering the inevitable nature of male effect and its long term consequences as indicated by the declining success rate of A.I. through out the world, strict legal restriction on rearing of breeding males may have to be reconsidered.
10. Prospective studies have to be initiated at least in few localities to understand the direct and indirect consequences of technologies in biological system in long term and to suggest suitable modifications whenever found necessary.

Since the breeding policy declared is only old wine in a new bottle, these observations have not been considered. Now in the context of Food security and safety these recommendations are very valuable. What should be the strategy for increasing production?

Friends, please discuss on the basis of these recommendations given above and send your valuable suggestions in the latest context. We feel proud that the department had thought of production issues years back. However as in many cases the department could not take advantage of this study as the recommendations had not been acted upon. We have to prove our worth for the society. Kindly discuss and come out with valuable suggestions.

Dr. K.V. Asokan Trust

Reg.No: 238/4/93

Best Veterinarian Kerala 2009 Award

Nominations are invited from Veterinarians working in Animal Husbandry Department only for **Best Veterinarian Kerala 2009 Award**. The nominee should be one "who invents or contributes a novel idea to the Veterinary Profession or one who does a meritorious Professional Service". (Page 6, Para 3)

One vet can nominate another or self nominations are also accepted. The concerned District Animal Husbandry Officer can also send nominations. Kindly intimate the name/s with his/her brief track record along with the passport size photograph so as to reach on or before 15th April 2009 in the following address. The Award will be given during the Annual General Body of the Veterinarian's Welfare Society, Kerala.

Dr. K. D. Paul, Managing Trustee

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DISTRICT NEWS

Thiruvananthapuram: Cutaneous Leishmaniasis detected in Thiruvananthapuram.

Dr. Jacob Alexander and Dr. Arun George visited the Anamala tribal settlement in Neyyar forest along with the team of doctors from the Medical College, Thiruvananthapuram on 5-3-09 to assess the role of animals in spreading cutaneous leishmaniasis detected in the colony.

Kollam: 1. A Send off was also given to Dr. Jamaludeen, Retired Deputy Director on 3-3-09 at NILA PALACE, Ezhukone.

2. A general body meeting of IVA Kollam was held on 3-2-09 at Kottiyam. The installation ceremony of the office bearers of IVA, KVSSA, & AHOAK was conducted. The following decisions were taken during the meeting that followed.

- i) To host the World Veterinarians' Day at Kollam
 - ii) IVA subscriptions would be completely collected before the end of August.
 - iii) A family tour was proposed to be conducted in April.
 - iv) To collect Rs. 5000/ from each member towards the construction of a Veterinarians' Building at Kollam.
3. In the afternoon session a class on Computation of Income Tax was also conducted.

Ernakulam: Ernakulam district hosted a two day National seminar on "*Recent trends in diagnosis and control of animal diseases with special reference to human health*" at International Hotel Kochi on March 13th and 14th.

The seminar was inaugurated on March 13th by Sri. K. R. Viwambaran, I.A.S vice Chancellor KAU Mannuthy. In his inaugural address, he stressed the need for veterinarians to keep abreast of the latest developments and knowledge in the sector particularly with regard to zoonotic diseases. He also maintained that the role of veterinarians is of tremendous importance in creating awareness in the society at large with regard to zoonotic diseases. A compendium was also released to mark the occasion.

Dr. K. Udayavarman, Additional Director, in his Presidential address, spoke about the control measures and strategies the department has in place to respond to any such eventuality. Dr. K. K. Sasi, DAHO, Ernakulam and associate patron of the seminar welcomed the guests and delegates. Dr. A. P. Somashekar Nair, President IVA, Kerala offered felicitations and Dr. K. V. Sukumaran, General Convener of the seminar proposed the vote of thanks.

In the technical sessions that followed, papers on zoonotic diseases were presented by distinguished scientists and scholars from across the country. Altogether 19 papers including those on related topics were presented and discussed thread bare. The papers were informative, highly scholarly and enlightening.

Curtains came down on the seminar with the valedictory function on March 14th which was inaugurated by Dr. R. Vijayakumar, Director of Animal Husbandry. In his address he promised great many developments of this kind in the near future. He also commended Dr. K. K. Sasi, Ernakulam DAHO, and his entire team who toiled to make the seminar such a huge success. The function was also addressed by Dr. Manomohan, Director of Extension, KAU, Mannuthy. Dr. Paul T. Kunnath, Deputy Director, Ernakulam conveyed the vote of thanks.

To add colour to the seminar, a boat ride through the back waters of Kochi was arranged for all the delegates in the evening.

Thrissur: IVA, Trissur unit conducted a discussion on food security followed by a survey among the members using a descriptive questionnaire. 5 major questions were asked to assess the level of the problem concerned, as perceived by our members, and , to get an opinion as to how to overcome the situation. A number of formal projects were suggested by some.

Covas, Pookot: New IVA chapter of Pookot Veterinary College inaugurated.

The newly formed IVA chapter of Veterinary College, Pookot inaugurated on 11th March 2009 at Seminar Hall, Veterinary College, Pookot. Dr.A.P.Somasekharan Nair, President, IVA, Kerala inaugurated the chapter. Dr.V.Jayaprakashan, Assoc. Dean i/c welcomed the gathering. Dr. Radhamma Pillai, President of the new chapter presided over the function.



Dr.A.P.Somasekharan Nair inaugurating IVA,Pookot Unit

Dr.T.Sreekumaran and Dr.T.V.Viswanathan, retired professors from Veterinary College, Pookot were honoured in the function. Dr. K.Anilkumar, Assoc. Professor, Dept. of Animal Breeding and Genetics who is the recipient of Dr.P.G.Nair endowment award for best teacher along with Dr. Chintu Ravisankar, Asst. Professor (Microbiology), Dr. Sajitha.I.S., Asst. Professor (Pathology) and Dr. Bipin.K.C., Asst. Professor (Preventive Medicine) recipients of Dr. N.P.Panicker memorial endowment award for academic excellence also were honoured in the func-

tion. Trophy for the College foot ball team who were the runners up in KAU intercollegiate competitions was presented in the function. First GOSNI award for best academic performance in veterinary pharmacology and toxicology was presented to Kum. Remya Vasudevan of 2004 batch.



Dr T. Sreekumaran honoured



Dr T. V. Viswanathan honoured

“Be Better” a motivation based training programme was conducted as a part of inaugural function. Dr. Haroon Abdul Rasheed(Treasurer of IVA, Kerala , member of KSVC and National Trainer) along with Dr. Prasad.A (Asst. Professor, COVAS, Mannuthy and Zonal Trainer) and Sri. Anoop, National Trainer, Junior Chamber International, India handled the training. The training concentrated on attitude development, strengthening interpersonal relationship and creating self awareness through SWOT analysis.

Dr. Fiji Ferdinand Francis, Gen. Secretary, IVA, Kerala, Dr.N.Gopakumar, Professor & Head, Dept. of Pharmacology, Dr.N.Ashok, KSVC member, Dr. Haroon Abdul Rasheed, Treasurer, IVA, Kerala, Dr. Saji Joseph, President, IVA, Wayanad and Sri. Sumesh, President, Students Union felicitated the function. Dr. Bipin.K.C, Secretary, IVA Pookot chapter delivered vote of thanks.

Kozhikode: The formal inauguration of IVA Quilandy taluk unit of Kozhikode District was on 7/3/2009 at Hotel Theertha International Payyoli by Hon'ble MLA Mr Vishwan maaash. Dr. U. Sreedharan, the Unit President, offered the welcome address. Respected MLA during his brief inaugural address appreciated the effort and commitment of the veterinarians and their ability to build and develop close association with rural dairy farmers. He also advised the vets to take advantage of economic recession for the benefit of rural farmers and to stabilise the acute scarcity of meat, milk, and egg by creating and implementing viable projects on this sector. Felicitations were offered by Dr A. V. Prasad, District IVA President, Dr Suresh T Ornadi, State Committee Member, Dr Bijalee Bhasker Lady representative of IVA and Dr Anilkumar District IVA Secretary. The programme was attended by more than 40 vets. The programme was followed by a magic show and ventriloquism by renowned artists of Calicut. Dr Baburatnam, Treasurer IVA offered the vote of thanks.

Malappuram:

- 1) The Monthly general body meeting of Malappuram chapter was held on March 3rd at Hotel Eranad Inn, Malappuram. Dr. K. Sajith, Dist. Secretary, IVA, welcomed the gathering and Dr. K.A. Sajeev kumar, Dist. President, IVA, presided over the function.
- 2) IVA announced the sanctioning of ADCP supervisory charges to the veterinary surgeons, holding additional charges of the institutions and also requested the district coordinator, ADCP to distribute the same to the veterinary surgeons at the earliest.
- 3) IVA Malappuram constituted a Vigilance Committee to guard hardworking veterinarians and to guide them. Dr. Ravishankar, District Animal Husbandry Officer, Malappuram, was elected as Chairman and Dr. V.K.P. Mohan Kumar, the Convener.
- 4) A short discussion on "Food Safety" was held in the meeting and all the members participated very actively.
- 5) As a part of Continuing Veterinary Education (CVE) and in association with Kerala State Veterinary Council, a class on "Infertility Management in Canines" was taken by Dr. Shibu Simon, Assistant Professor, COVAS, Mannuthy. The talk inspired the members to face arising challenges in pet animal practice.
- 6) IVA strongly requested the District Level Technical Advisory Group to fix unit costs for the effective formulation and implementation of Animal Husbandry projects under People's Plan Campaign, phase II.

Dr. P. Usha, Treasurer, IVA, delivered vote of thanks .

As a matter of general interest Mohan Baghvat, the new RSS head is a veterinarian by profession.

FORTHCOMING EVENTS

EXECUTIVE COMMITTEE AT THRISSUR ON 5TH APRIL at veterinarians hall ; A meeting of the state executive committee of Indian Veterinary Association shall be conducted at Veterinarians' hall ,Kalliath square Thrissur on 5th April 2009 at 11 A.M.State office bearers, presidents and secretaries of districts and colleges along with elected 10 executive committee members and immediate past president and general secretary are to participate in the meeting..Authorised persons of Jiva, Jiva on line ,Member representing KSVC,and building committee members have to participate in the meeting.**Members are requested to inform their suggestions or views or any issues to be taken up by the meeting in common interest through any of the office bearers as mentioned above.**This meeting will be followed by a joint executive committee meeting.

Thiruvananthapuram

- 1) IVA Thiruvananthapuram is organizing a CVE on "Leishmaniasis" by Dr. Jyothi Susan Varghese, General Hospital, Thiruvananthapuram and Dr. Jacob Alexander, District Veterinary Centre, Thiruvananthapuram at the Thycaud Guest House at 2.30pm on Thursday the 2nd of April 2009.
- 2) IVA Thiruvananthapuram & KSVC are jointly organizing a CVE on " Mastitis- An Immunological perspective " by Dr. Antrison Morris, Department of Animal Health Science, North Carolina A&T State University at the KVSC building, Peroorkada on Saturday (4-4-09) at 4PM.

SERVICE NEWS

1) Election Duty memorandum submitted.

IVA, Thiruvananthapuram along with KVSSA submitted a memorandum to the District collector to exempted all veterinarians from election duty.

All Veterinarians have been exempted from election duty. The order has been issued by the State Election Commission.

2) Dharna on March 12th



Dr Justin Jacob Adhikaram addressing the veterinarians who participated in the panchayath march and dharna at Mattukatta on 12th March, protesting the manhandling of Dr Nandagopal VS, VD, Mattukatta by Sri Kuttichan, Ward Member . Such incidents are on the increase and need to be dealt with seriously.

A combined general body of all the associations was conducted emergency on 25/03/09 atThodupuzha. This case came up for discussion. Dr. Nandagopal reported that he would accept any decision taken by the general body which finally came to a conclusion to let the law take its own course.

KSVC NEWS

- 1) The Registrar has been appointed as per GO (M) No.437/2009/AD dtd 19/3/2009 to study the condition of the AHD Farms and their performance and suggest practical measures to make the farms viable. In this context, the Registrar, KSVC, invites **observations, opinions, suggestions and projects from interested members to make these farms economically viable.**
- 2) Kerala State Veterinary Council has decided to start a Vet's Club from April 1st onwards. The members will have the privilege to access the Internet for a minimal subscription of Rs 100/- per month from 5 pm to 7.30 pm everyday.
The Council invites all veterinarians to join and utilise this facility. For more details contact the Registrar, Kerala State Veterinary Council.
- 3) The last Basic Computer Training will be conducted in April 2009. The exact dates will be announced later.
- 4) The closing of the Electoral Roll for election purpose will be April 30th. Only registered veterinary practitioners will be eligible to participate in the election.

The book titled **READY RECKONOR FOR DRUGS** compiled by Dr Suresh Nair and Dr Ramankutty and published by IVA PALAKKAD is for sale at Rs.50/- . All the current drugs used in veterinary practice has been included in this book. For details Dr Jayan -9847240000.

Veterinarians Welfare Society

We request all vets who have not yet joined the Veterinarians' Welfare Society till date to do so as soon as possible. Kindly give importance to this as our participation helps not only for ourselves but also all other members of the fraternity. The one time joining fee is Rs 5000/- which can be paid as a single or more instalments. Contact your district office bearers for further details.

JIVAONLINE invites all members to visit the website of IVA, Kerala www.jivaonline.net and to register themselves in it. This registration is to form an online database of vets. This website provides online updated professional information, doctor online facility, and building booking facility.

- Also JIVAONLINE invites us to **post a diagnosis and offers 2 exiting prizes each month.**
- Jiva online will be **conducting discussion on topics of interest to veterinarians.** Veterinarians are requested to register as subscribers and to visit the site regularly and express their views. The discussions shall be led by Dr. Sibi K.Chacko, Chief Editor of Jivaonline.

Visit www.jivaonline.net

Obituary

Dr. T. G. Ramachandran, passed away on 12-3-09. He was the former Indian Director of Indo-Swiss Project and Joint Director of Animal Husbandry Department. May his soul rest in peace.

Dr. A. Vaidyanatha Iyer, former Director of Animal Husbandry passed away on 21/3/2009. May his soul rest in peace.

SMS GROUP FOR VETS

IVA Kerala is proud to inform its members that an SMS group has been created. All flash news will be intimated to all members on their mobiles.

Mail your suggestions, views and news to ivakerala2009@yahoo.com by 25th of every month. Selected and edited versions of feed back and suggestions will be published from next issue onwards.

Help us to release each issue in time each month by sending your news and views in time. Thank you.

ERRATUM

The following correction may be noted in the previous issue.

The title on page 2 should read "Excerpts from the Governor's Speech". We regret the error.

HENDRA VIRUS INFECTION: AN EMERGING ZONOSSES

Dr.Arun George and Dr.Julie B.

Veterinary Surgeons

Chief Disease Investigation Office, Palode

Hendra virus infection is an emerging viral disease of horses and humans in Australia. The recent death of a veterinarian who contracted hendra virus infection while treating an infected horse at a veterinary clinic in Australia underlines the risk associated with veterinary profession and on the importance of taking adequate precautionary measures while attending animals for treatment or during autopsy.

Hendra virus infection was first discovered in September 1994 from an outbreak in horses at a training complex in Hendra, a suburb in Queensland, Australia.

Etiology

Hendra virus (HeV) is a single stranded RNA virus of the genus *Henipavirus* in the family *Paramyxoviridae*. It was earlier classified under morbilli virus. This genus also includes the closely related Nipah virus. Nipah viral infection is another zoonotic disease which causes neurological and respiratory disease in pigs and humans.

Geographic Distribution

Hendra virus infections have been seen only in Australia, where this virus is endemic in fruit bats. Fruit bats are widely

distributed in Australia (and south-east Asia and India). Approximately 47% of fruitbats in Australia are seropositive.

Location	Cases	Time
Mackay, Queensland	2 horse	August 1994
Hendra, Queensland	20 horses	September 1994
Cairns, Queensland	1 horse	January 1999
Cairns, Queensland	1 horse	October 2004
Townsville, Queensland	1 horse	December 2004
Peachester, Queensland	1 horse	June 2006
Murwillumbah, New South Wales	1 horse	October 2006
Peachester, Queensland	1 horse	June 2007
Clifton Beach, Queensland	1 horse	July 2007
Redlands, Queensland	5 horses	June 2008
Cannonvale, Queensland	2 horse	July 2008

Transmission

Bats of the genus *Pteropus* (fruit bats/ flying foxes) appear to be the reservoir hosts of Hendra virus. The route of transmission from bats to horses is unknown, but the virus may be spread in birth products such as aborted fetuses, or possibly in urine. Horses can become infected by ingesting the virus in contaminated feed. Aerosol transmission appears to be inefficient. In infected horses, the virus has been isolated from urine and oral cavity, but not from feces. The Hendra virus does not appear to be highly contagious in horses, and close contact seems to be necessary for it to spread. However, horse-to-horse transmission has been reported.

Humans acquire infection by contact with body fluids of horses or aerosols. No one has apparently been infected by direct or indirect exposure to infected bats. Human to human spread has not been reported.

Infection in Animals

Naturally occurring infections have not been reported in any species other than horses or fruit bats. Bats of the genus *Pteropus* (fruit bats/ flying foxes) appear to be the reservoir hosts of Hendra virus. Other species are thought to be spillover hosts. Experimental infections have been established in cats, horses and guinea pigs. Dogs, mice, rats, rabbits and chickens do not develop symptoms even after experimental inoculation.

Clinical Signs

In horses, the incubation period is eight to 16 days. The clinical signs include a high fever, anorexia, depression, sweating and uneasiness. The major symptoms are those of a severe respiratory disease; the respiration is rapid, shallow and laboured, and the mucus membranes may be congested. Jaundiced mucus membranes, ataxia, mild neurologic signs or subcutaneous edema may also be seen. In the terminal stages, animals often develop a copious frothy nasal discharge. The clinical course is acute; death usually occurs one to three days after the initial signs. Some convalescent horses may develop neurological signs, but others seem to recover fully. Fruit bats asymptomatic carriers of the disease.

Post Mortem Lesions

In horses, common lesions include marked pulmonary edema, dilation of the pulmonary lymphatics, and congestion and ventral consolidation of the lungs. Petechial hemorrhages have been seen on the pleural surfaces, and patchy hemorrhages may be found in the lung parenchyma. In natural infections, the airway often contains white or blood-tinged foam, and edema fluid oozes from cut tissues. Excess pleural and pericardial fluid, congested lymph nodes and visceral edema may also be seen. Scattered petechiae and ecchymoses may be found in the stomach, intestines and perirenal tissues. Yellowing of the subcutaneous tissue is common.

Clinical Signs in Humans

Influenza-like disease with fever, myalgia, dry cough, sore throat, cervical lymphadenopathy, fatigue, body aches and in some cases meningo-encephalitic symptoms were noticed.

Prevention in Humans

Precautions should be taken to prevent contact with blood, tissues and body fluids, particularly respiratory secretions, nasal secretions, saliva and urine of suspected horses. Exposed areas should be washed with soap and water, and then disinfected with an iodine-based antiseptic or ethyl alcohol. Vaccines are not available.

Diagnostic Tests

Hendra virus is a biosafety level 4 (BSL4) pathogen. Hendra virus infections can be diagnosed by virus isolation, detection of nucleic acids or antigens, or serology.

In live animals, virus isolation is done from the blood, nasal swabs, urine, placenta and fetal tissues. Tissues such as lung, mediastinal lymph nodes, liver, spleen or brain can be collected at necropsy. Viral antigens can be detected by RT-PCR, immunoperoxidase or immunofluorescence.

Serologic tests include indirect immunofluorescence, immunoblotting, serum neutralization and ELISAs. Cross-reactions can occur between Hendra and Nipah viruses in all serologic assays, however, reactions to Hendra virus can be identified by comparative neutralization tests.

Treatment

Other than supportive therapy, there is no treatment for Hendra virus infections.

Prevention

Vaccines are not available. In horses, prevention is based on minimizing exposure to infected bats, their tissues and secretions. Any dead fruit bats should be removed and destroyed by burning or burial. Horses that develop severe respiratory disease should be considered contagious, and standard infection control measures should be taken to avoid further contamination. If hendra virus infection is confirmed, in contact animals must be observed for 28 days from the initial signs in the first case or 22 days from the death of the last case. Carcasses should be disposed by deep burial. Contaminated areas should be cleaned and disinfected with agents such as anhydrous sodium carbonate at 40g/litre or hydrated sodium carbonate at 100g/litre. It is better to avoid generating aerosols or splashing material during disinfection.

Disease Status of India

An outbreak of acute encephalitis occurred in Siliguri (West Bengal) town of India between January 31 and February 23, 2001. The outbreak was investigated by a team drawn from All India Institute of Medical Sciences (AIIMS), New Delhi; National Institute of Communicable Diseases (NICD), Delhi; National Institute of Virology (NIV), Pune and WHO Country Office. A total of 66 probable cases and 45 deaths were reported. In the Siliguri outbreak there were definite linkages between cases indicating man-to-man transmission. Centres for Disease Control and Prevention, Atlanta, USA on the basis of preliminary tests concluded that the causative pathogen appears to be Nipah/Hendra or closely related virus. Though the results have been stated to be preliminary by CDC, the similarity in clinical picture, case fatality and incubation period with laboratory-proved Nipah outbreaks in Malaysia, Bangladesh and Singapore support the hypothesis of this outbreak to be due to Nipah virus (Harit, et al., 2006).

Reference

- 1) Harit A. K., et al. (2006) Nipah/Hendra virus outbreak in Siliguri, West Bengal, India in 2001, Indian J. Med. Res. 123, April 2006, pp 553-560.
- 2) FAO/VPHASIA weekly update dated 30th August 2008
- 3) Guidelines for Veterinarians Handling Potential Hendra Viral Infection in Horses, Department of Primary Industries and Fisheries, Queensland, Australia, August 2008-10-22
- 4) Hendra Virus Infection, Iowa State University, College of Veterinary Medicine, www.cfsph.iastate.edu, pp 1-6
- 5) Hendra virus infection and Nipah virus encephalitis, Centre for Disease Control and Prevention, USA, www.cdc.gov

VISIT TO A MODEL DAIRY UNIT AT VILAPPILSALA

By : **Dr. Jacob Alexander**

Secretary, IVA, Thiruvananthapuram

Recently several investors are showing interest in the Dairy sector due to the short falls in Real Estate, IT and other allied sectors. With this background several of them are approaching veterinarians with queries about dairy farms. I happened to visit the model dairy unit at Vilappilsala, Thiruvananthapuram with such a group of investors. It was a fine experience for all of us.



The Model dairy unit is established in front of the Veterinary Dispensary, Vilappil, in a land owned by the Karode, APCOS. The dairy unit is owned and run by the milk society. The cattle shed is a well-ventilated one with a holding capacity of 17 animals. It is different from the farms we usually see with its fans, rubber mats, automatic drinking facility, milking machines, hand showers and other such facilities etc.



The dung is disposed in an ideal way in a covered dung pit. The urine is treated in a 3-stage septic tank and finally emptied to a silt tank. At present there are 10 high yielding CBHF animals.



The society is all geared up for setting up large milk cooling tanks and other fully automated and computerized systems including milk testing and pricing which



would avoid bias.

The farm practices a feeding of green fodder, bypass protein and other low cost items rather than the costly oil cakes. The farm is managed well and is running profitably. Dr. R. Venugopal, Veterinary Surgeon, Vilappil provides the technical assistance to the farm. The local farmers are provided with the know-how to improve the productivity and profitability of their own farms.

The “Pappas Dairy” with 130 animals is a new large dairy farm run by a pilot is also near by. For an entrepreneur, visits to these ventures will be an eye opener.

For more details

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Just for a thought! - “You will never cross the ocean by staring at the sea.”