INDIAN VETERINARY ASSOCIATION

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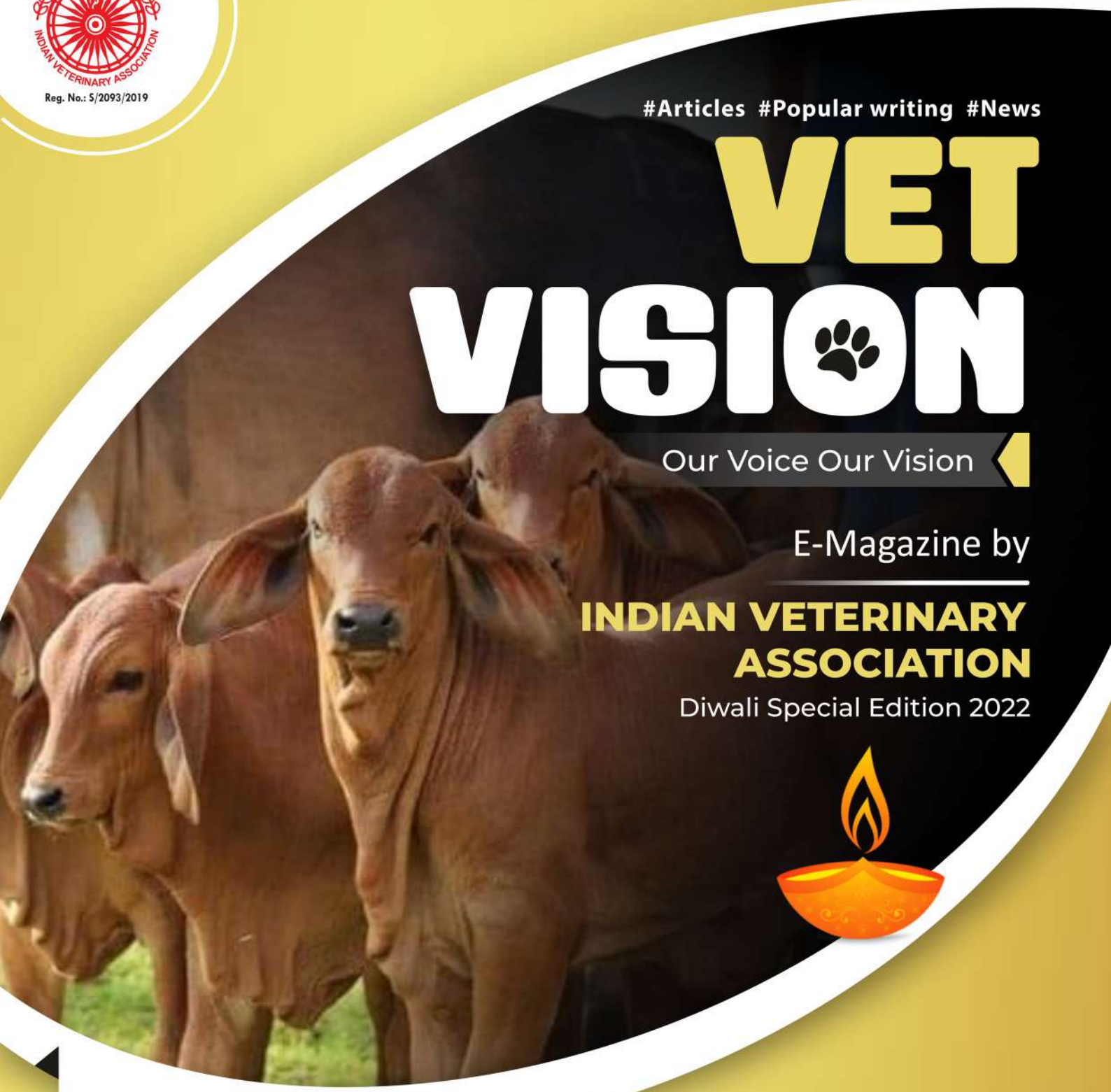
#Articles #Popular writing #News

VET VISION

Our Voice Our Vision



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VET VISION

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Our Voice Our Vision

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The Inside Contents

FROM THE
EDITOR'S DESK

The editorial committee is pleased to express its satisfaction while bringing out the third quarterly edition of "Vet Vision," the e-magazine of the Indian Veterinary Association, after the great festivals of our country, Dussehra and Diwali. Hope that all the members had great joy during the festivals.

In the turbulent times of the LSD pandemic, with high morbidity, India and the neighboring countries are facing the daunting task of controlling the dreaded disease. The "vet vision" is trying to provide some glimpses of the disease and its control to its readers. Another interesting topic in the edition is how artificial intelligence, a more sought-after technology among IT professionals, is gradually spreading into the veterinary profession. The editorial team feels that the article on AI in veterinary medicine will give the members some clues about its scope for improving the AH sector.

The enthusiasm among the young members to send the articles is really a positive and encouraging sign, which is making the editorial team, work with more dedication. The editors are taking enough care, especially to make the e-magazine an interesting one, and for this, the team requests all the members to cooperate by sending articles they feel are useful to other professional members. With these few remarks, the team closes by inviting you all to give your valuable feedback and comments at ivaemagazine@gmail.com.

For the coming new year edition of our e-magazine, the editors invite all interested members of IVA to submit their works or the materials generated through their experiences, enabling us to bring out a dynamic and informative NEW YEAR edition of "VET VISION".

MEDICINAL PROPERTIES OF
CAMEL MILK

Dr. Abhinav Meena, Bikaner
Dr. Lakshmi Kant, Bikaner

Camels are the most important species of animals in Rajasthan, India. They are multipurpose animals as they produce milk, meat, hide and also used for other purposes like transportation, entertainment, celebration, competition and beauty shows.

As per 20th livestock census, total camel population in India was 0.25 million during 2019, which has decreased by 37.1% in comparison to previous census.

Rajasthan has near about 0.213 million camels and stands first with 85.20% of total camel population in India.

Camel milk is known as "White gold of desert" because they produce milk even during dry season and drought period of year when milk from other sources like cattle and goat is scare.

Camel milk has many properties that make it different from other animal milk i.e.

- Easily digestible.
- Low cholesterol.
- Low sugar.
- High minerals (sodium, potassium, copper, zinc & magnesium).
- High unsaturated fatty acids.
- High vitamin C (3 times higher than cow milk).
- High vitamin B.
- Iron (10 times higher than cow milk).
- Higher protein like lactoferrin, lactoperoxidase, immunoglobulins and lysozyme.
- Immunological properties.
- It lacks beta-lactoglobulin that make is it useful for lactose individual intolerance.

Camel milk treats various diseases: -

It is unique in terms of: -

- Antioxidative factors.
- Anti-bacterial.
- Anti-viral.
- Anti-fungal.
- Anti-hepatitis.
- Anti-arthritis.
- Anti-ulcerogenic.
- Anti-allergic.
- Anti-diarrheal.
- Anti-carcinogenic.
- Anti-diabetic.

Camel milk helps in curing: -

- Dropsy.
- Jaundice.
- Paratuberculosis.
- Spleen ailments.
- Asthma.
- Anaemia.
- Piles.
- Rickets.
- Constipation.
- Diabetes (0.5 liters consumption of camel milk/day reduces insulin demands in diabetic patient.
- Autism spectrum disorder.
- Crohn's disease.
- Skin disease treatment.
- Glycaemia.

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A CASE REPORT ON TRYPANOSOMIASIS IN **LABRADOR RETRIEVER DOG**

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Abstract

The present case describes the incidence of canine trypanosomiasis in a 04 years old female dog presented to the Veterinary Clinical Complex, College of Veterinary Science, Warangal with a history of chronic inappetence, lethargy, emaciation and corneal opacity and clinical examination revealed high temperature (104^{0}F), bilateral corneal opacity, lateral deviation of head, mucopurulent lacrimal discharge, frothy and sticky salivation, abnormal heart and lung sounds which were in grave prognostic condition. Based on blood smear examination the case was diagnosed as trypanosomiasis which necessitated immediate medical treatment with Quinapyramine Sulphate (3.5mg/kg) and Doxycycline (10mg/ kg), along with supportive therapy.
Keywords: Canine, Trypanosomiasis, Corneal opacity, Quinapyramine Sulphate

Introduction

Canine Trypanosomiasis is caused by protozoa of the genus Trypanosoma and this disease was originally enzootic and affected only wild animals, including mammals and birds, which served as reservoirs. Later, it spread to domestic animals such as horses, cattle and dogs.

Dogs are the leading domestic animals and participate in the transmission and maintenance cycles of these parasites. (Eloy LJ & Lucheis SB, 2009). Indigenous pure breed, foreign breeds and cross breeds of dogs are susceptible to trypanosomosis (Annette et al., 2006; Akpa et al., 2008).

Dogs have been implicated to serve as links for parasite exchange between livestock and humans and remain an important source of emerging and re-emerging diseases including trypanosome infections (Lisulo et al. 2014). Trypanosoma evansi is the only pathogenic species reported from dogs in India (Juyal et al., 2005). The disease caused by T. evansi known as 'Surra', is widely distributed in India infecting camels, cattle, horses, dogs and rodents and spreads mechanically by arthropod vectors mainly Tabanid flies (Herrera et al., 2004; Singh & Singla, 2013).

Dogs were thought to be infected by eating fresh meat, blood, offal or bones. Once infected, a trypomastigote form of protozoan parasite enters the bloodstream directly or through the lymphatics. Diagnosis in most cases depends on clinical signs and the demonstration of trypanosomes in the blood. (Cullinaneet al. 2006).

The present case study describes the etiology, diagnosis, treatment and prognosis of trypanosomiasis in canines.

History and clinical signs

A 04 years old female dog was presented to the Veterinary Clinical Complex, College of Veterinary Science, Warangal with a history of chronic inappetence, lethargy, emaciation (Fig 1) and corneal opacity (Fig 2). There was a rearing history of a dog being kept with tick-infected cattle together in a shed. Clinical examination revealed high temperature (104ºF), bilateral corneal opacity, lateral deviation of head, mucopurulent lacrimation, frothy and sticky salivation, and abnormal heart and lung sounds which were in grave prognostic condition.

Diagnosis

1 ml of whole blood was collected and examined microscopically which revealed low counts of RBC and low levels of hemoglobin on the complete blood picture. one drop of blood was collected from the ear tip for wet and dry blood smear examination. One drop of whole blood was placed on a fresh glass slide covered with a cover slip and observed under 10x power. Thin blood films are made by placing a drop of blood (about 5 µl and 5 to 10 µl for thick blood) film at one end of a slide and the edge of another slide is placed just close enough to the drop of blood for it to spread along the edge. Then, with swift movement blood is spread on the slide. Ideally, thin films should be prepared so that the RBCs are fairly closer to each other but with no overlapping. The slide is air-dried and then fixed in methanol. The fixed slide is later stained with Giemsa stain. (Lumsden et al., 1979). The dog was treated with Doxycycline @ 10mg per kg Bwt IV, Quinapyramine sulfate @ 3.5 mg per kg Bwt IM, 6% Starch solute on @ 10 ml per kg Bwt, 25% Dextrose along with oral iron supplements.

Results and discurssion

In the present case, an infection might have been transmitted from domestic cattle as they were following a combined rearing system of the dog and domestic farm animals. Raina Kumar et al. 1985, Uilenberg 1998, Montenegro and Jiménez et al. 2002 stated that the disease is transmitted through bites from an infected tsetse fly. However, dogs can also get the infection by ingestion of insect vectors or infected fresh animal carcasses that died recently from trypanosomiasis and through oral experimental infection. Reported clinical signs in the present case were high fever (104ºF), bilateral corneal opacity, lateral deviation of head, mucopurulent lacrimation, frothy and sticky salivation and abnormal heart and lung sounds were matched with Aquino et al., 1999; Bono Battistoni et al., 2016; Greif et al., 2018; Jaimes et al., 2017 findings as weakness, fever, weight loss, anemia and lymphadenomegaly in canine trypanosomiasis.

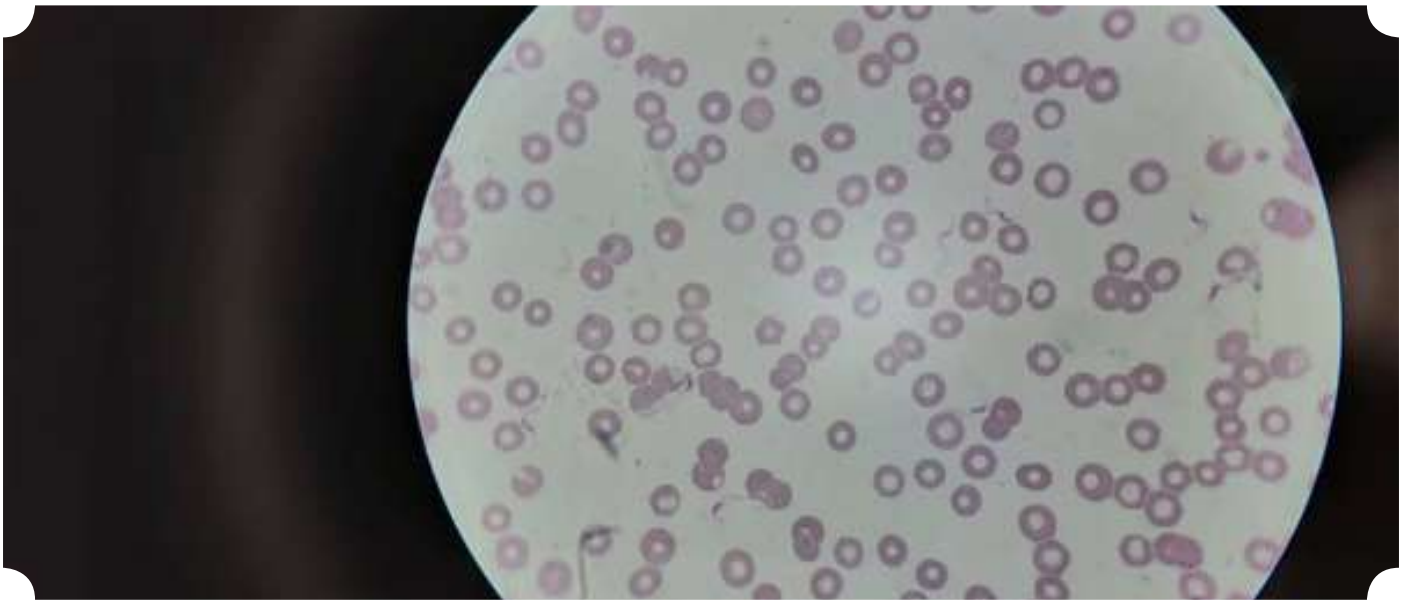
Live moving extracellular flagellated Trypanosoma organisms were observed on wet blood smear and clear trypomastigotes (Fig 3) were observed in Giemsa-stained blood smear under oil immersion. Irwin and Jefferies (2004), and P Ramesh et al. (2016) also reported that the presence of trypomastigotes in thick or thin blood films, and buffy coat smears were diagnostic findings in trypanosomiasis in dogs.But in the present case, the dog died despite treatment because of delayed presentation to the clinic and heavy parasitic load which

causes severe hypoglycemia leading to convulsions and coma, chronic cardiac failure due to hypoxia. Similarly, Singh C et al. (2017) treated Trypanosomiasis in dogs with quinapyramine sulfate 3.5 mg/kg Bwt SC in two divided doses at 12-hour intervals. The dog showed clinical recovery within a week. Rani and Suresh 2007 reported that there are several effective trypanosomacidal agents for dogs including suramin, quinapyramine and diminazene but a single dose of diminazene aceturate is effective in eliminating the natural Trypanosomiasis infection in canines.

Fig 1: Emaciated animal

Fig 2: Corneal opacity

Fig 3: Trypanosome organisms on Giemsa-stained blood smear



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पशुओं में परजीवी रोगः रोकथाम एवं बचाव

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भारत कृषि प्रधान देश होने के कारण शुरूआत से ही कृषि एवं पशुधन पर आधारित है। भारत की लगभग 67 प्रतिशत आबादी ग्रामीण क्षेत्र से संबंधित है एवं पशुधन इन ग्रामीण पशुपालकों के लिए आय का प्रमुख स्त्रोत है। भारत कुल पशुधन जनसंख्या, दुग्ध उत्पादन, मवेशी जनसंख्या एवं भैंस की जनसंख्या आदि में विश्व में प्रथम स्थान पर है।

भारत में 20वीं पशुधन गणना के अनुसार कुल पशुधन की संख्या 535.78 मिलियन है जो कि 2012 जनगणना की तुलना में 4.6 प्रतिशत की वृद्धि प्रदर्शित करती है। अतः पशुधन का भारत की आर्थिकी में बहुमूल्य योगदान है। परन्तु बढ़ती हुई परजीवियों की संख्या एवं उपचार के लिए उपयुक्त दवाई के प्रति बढ़ती प्रतिरोधकता पशुधन को हानि पहुँचा रही है। ये परजीवी पशुओं के रक्त, माँस व भोजन का उपयोग करके पशु को कमजोर बना देते है। पशु के शारीरिक भार में भी गिरावट आती है एवं त्वचा खुरदुरी हो जाती है।

परजीवियों को दो तरह से विभाजित किया जाता है बाह्य परजीवी एवं अंतः परजीवी। ऐसे परजीवी जो शरीर की बाहरी त्वचा पर संक्रमण फैलाते है बाह्य परजीवी कहलाते है, जैसे कि किसी घाव पर मक्खियों द्वारा मैगट (कीड़े) उत्पन्न होना, मच्छर द्वारा बाहरी त्वचा को काटना, डीमोडेक्स एवं सारकोप्टस द्वारा खुजली होना आदि। जबकि अंतः परजीवी शरीर के अन्दर अलग–अलग अंगों जैसे अमाशय, यकृत, प्लीहा, छोटी एवं बड़ी आंत आदि में पाये जाते है।
इन परजीवियों के अधिक संक्रमण होने पर इन अंगों की कार्य क्षमता में कमी आती है। उदाहरण– कृमि परजीवी जैसे कि टोक्सोकेरा विटुलोरम, हिमोंक्स कंटोर्टस, एम्फीस्टोम्स, सिस्टोसोमा प्रजाति आदि एवं रक्त में पाये जाने वाले सूक्ष्म परजीवी जैसे कि ट्रिपनोसोमा, बबेसिया, थायलेरिया आदि। मुख्य रूप से कृमि परजीवी तीन प्रकार के होते है, गोलकृमि, चपटे कृमि (पर्ण कृमि) एवं फीता कृमि।

1) कृमि संक्रमणः गोलकृमि संक्रमणः गोलकृमि संक्रमण मुख्यतः टोक्सोकेरा विट्लोरम, हिमोंक्स कंटोर्टस, ट्रिकोस्ट्रोंगाईलस, ब्यूनोस्टोमम, ओस्टरटेजिया, ओईसोफेगोस्टोमम आदि परजीवियों के वंश की प्रजातियों द्वारा संक्रमण होता है। इस संक्रमण से प्रभावित अधिकतर रोमंथी पशु होते है, जैसे कि गाय, भैंस, भेड़ एवं बकरी आदि। संक्रमण का प्रसारण दूषित खाने व जल के साथ होता है। इन परजीवियों में सबसे खतरनाक हिमोंक्स कंटोर्टस परजीवी है जिससे पशु की मृत्यु परजीवी द्वारा रक्त चूसने के कारण हो जाती है। यह संक्रमण अधिकतर पशुओं में बरसात के बाद होता है जब हरी घास के साथ कृमि इन पशुओं के पेट में चले जाते है। इन परजीवियों के द्वारा संक्रमण से भेड़ एवं बकरियां अधिक प्रभावित होती है क्योंकि ये जानवर अधिकतर जंगल, खुले घास के मैदानों, पहाड़ों एवं तराई क्षेत्रों में चरने जाते है जहां ये कृमि प्रसुप्त अवस्था में पड़े रहते है। जबकि मवेशी (गाय, भैंस) अधिकतर संक्रमित आहार व जल ग्रहण करने से बीमार पड़ जाते है। इनमें सबसे खतरनाक रोग पटेरा रोग है जो टोक्सोकेरा विटुलोरम नामक परजीवी से होता है। जिसमें जन्म के बाद बछड़ों के पेट में कीड़े पड़ जाते है और ये बछड़ों की छोटी आंत में भोजन के अवशोषण को कम कर देते है जिसके कारण बछड़े कमजोर व दुबले हो जाते है। इस रोग से ग्रसित बछड़ों में से बदबूदार कीचड़ जैसा पतला दस्त होता है, जिसके साथ कभी–कभी गोलकृमि भी बाहर आ जाते है।

चपटे कृमि संक्रमणः यह संक्रमण मुख्यतः फैसियोला, सिस्टोसोमा एवं एम्फिस्टोम आदि चपटे कृमि परजीवी द्वारा होता है। ये परजीवी गाय, भैंस, भेड़, बकरी आदि पशुओं में मुख्य रूप से पाये जाते है। इन रोगों का संक्रमण भी बरसात के बाद अधिक देखने को मिलता है, क्योंकि बरसात के बाद घोंघे जो कि इस संक्रमणों के प्रसार के लिए जिम्मेदार है, नदी व तालाब के आसपास बढ़ी हुई हरी घास पर पाये जाते है। इन घोंघो में इन परजीवियों के जीवन चक्र की कुछ अवस्था चलती रहती है और ये अवस्थायें घास के साथ–साथ पशु के पेट में प्रवेश कर जाती है। इनमें से फैसियोला नामक परजीवी द्वारा संक्रमण घातक साबित होता है, क्योंकि यह परजीवी भेड़ एवं गायों के यकृत एवं पित्त नलिकाओं में संक्रमण फैलाता है जिससे यकृत की कार्यशक्ति कमजोर हो जाती है। जिसके कारण पशुओं में भूख न लगना, अपच, बदबूदार दस्त, आंखों की श्लेष्मा झिल्ली पीली पड़ना, रक्ताल्पता (एनीमिया), पशुओं में जबड़े के नीचे सूजन आना एवं कभी कभी भारी मात्रा में संक्रमण होने पर पशु की अचानक मृत्यु भी हो जाती है।

नेजल सिस्टोसोमोसिसः यह रोग सिस्टोसोमा नेजेलिस प्रजाति द्वारा होता है। इस रोग को नकड़ा रोग भी कहते है। यह रोग गाय, भैंस एवं बैलों में अधिकतर पाया जाता है। इस रोग से ग्रसित पशुओं की श्वास नलिकाओं में फूलगोभीनुमा उभार देखने को मिलता है। जिससे पशु को सांस लेने में तकलीफ होती है और नाक में भी सूजन आ जाती है। दुधारू पशुओं में दुग्ध उत्पादन में कमी आती है। खेतों में कार्य करने वाले बैलों की कार्यक्षमता एवं शारीरिक बजन में कमी आती है। चिकित्सीय अभाव में कभी–कभी यह रोग जानलेवा भी साबित हो सकता है।

फीताकृमि संक्रमणः यह रोग मवेशी (गाय, भैंस), भेड़, और बकरियों में अधिकतर पाया जाता है। इस रोग से अपरिपक्व जानवर (6 माह से कम) अधिक ग्रसित होते है। यह रोग मोनिजिया नामक परजीवी से अधिकतर होता है। पशु दुबले–पतले होते जाते है, क्योंकि ये फीताकृमि पेट में भोजन के अवशोषण में बाधा पहुंचाते है। कभी–कभी बीमार पशु के गोबर से फीताकृमि के टुकड़े बाहर आने लगते है, जो कि पके हुए चावल की तरह दिखते है। उचित उपचार न मिलने की दशा में पशु की मृत्यु भी संभव है।

इसके अलावा टेनिया एवं एकायनोकोकस परजीवी की लार्वल अवस्था इन पशुओं के विभिन्न अंग जैसे फेफड़े, यकृत, व किडनी में पाई जाती है। जिससे इन अंगो की शव परीक्षण के बाद उपयोग नहीं हो पाता। बहुत दिनों तक बहुत संक्रमण होने की दशा में पशु का दिन व दिन दुर्बल होना, पशु का खाने व पीने में मन न लगना, हमेशा सुस्त रहना आदि लक्षण दिखाई पड़ते है।

कृमियों के रोग की रोकथाम एवं उपाय

1. मानसून आने से पहले एवं बाद में पशुओं को नजदीकी पशुचिकित्सक की सलाह के अनुसार कृमिनाशक दवाई दे देनी चाहिए, जिससे पशु के पेट के अन्दर के कीडे मर सकें। कृमिनाशक दवाई साल में दो से तीन बार देनी चाहिए। एक समय पर एक ही कृमिनाशक दवाई का उपयोग करना चाहिए। जिससे कृमियों में उस दवाई के प्रति प्रतिरोधक क्षमता का विकास न हो।
2. जहाँ पर मवेशी पशु बांधे जाते है, उस जगह पर जैसे कि गोबर, मल–मूत्र आदि की नियमित साफ–सफाई रखना अति–आवश्यक है।
3. बीमार पशुओं को स्वस्थ पशुओं से अलग रखना चाहिये और पशु चिकित्सक की सलाह से उनका सही समय पर उपचार करवाना चाहिए। इसी प्रकार युवा जानवरों को व्यस्क जानवरों से अलग बांधना चाहिए क्योंकि युवा जानवर संक्रमण के लिए अधिक संवेदनशील होते है।
4. पशुओं को साफ चरागाह में चराना चाहिए एवं स्वच्छ जल व खाना देना चाहिए।
5. प्रभावित क्षेत्रों में घोंघानाशक दवाई का छिड़काव करना चाहिए जिससे घोंघो में विकसित हो रही लारवल अवस्था मर जाये।
6. पशुओं को गंभीर बीमरियो से बचाने हेतु पशुचिकित्सक की सलाह पर टीके लगवाना चाहिए।

2) प्रोटोजोआ संक्रमण: प्रोटोजोआ मुख्यतः जानवरों के रक्त एवं आंत में निवास करते है। जैसे कि ट्रिपेनोसोमा, बबेसिया, थायलेरिया, एनाप्लाज्मा रक्त में पाये जाते है, जबकि एन्टअमीबा, जिआरडिया, ट्रायकोमोनास एवं बेलेनटीडियम कोलाई आदि परजीवी आंत में पाये जाते है।

सर्रा (ट्रिपैनोसोमोसिस): सर्रा रोग ट्रिपेनोसोमा इवानसाई नामक रक्त परजीवी द्वारा होता है। यह रोग सबसे पहले ऊँट में पाया गया था। इस रोग को ऊँट में तिवरसा के नाम से जाना जाता है। इस रोग का संचारण रक्त चूसने वाली मक्खियां जैसे डांस, स्टोमक्सी आदि के काटने से फैलता है। इस रोग से बड़े पशु जैसे गाय, भैंस, घोड़ा एवं ऊँट ज्यादातर प्रभावित होते है। जबकि यह रोग अवयस्क पशुओं में कम देखा जाता है।

यह परजीवी रक्त में ग्लूकोस की कमी कर देता है जिससे पशु में खून की कमी, दूग्ध उत्पादन में कमी, कभी–कभी पशु बैठा ही रहता है। इधर–उधर पैर मारता है, दहाड़ता है, अचानक किसी चीज से इधर–उधर भागता है। किसान भाईयों को इस रोग के लक्षण कई तरह की विशाक्तता जैसे लगते है, जिससे किसान घबरा जाते हैं। लंबे समय तक संक्रमण की दशा में पशुपालक न तो खुद निर्णय ले पाता है कि पशु का इलाज करावाया जाये या नहीं क्योंकि इस रोग के लक्षण आते जाते रहते है।

बबेसियोसिसः इस रोग को लाल मूत्र बीमारी के नाम से भी जाना जाता है। यह रोग बबेसिया बाईजेमिना नामक रक्त प्रोटोजोआ से होता है। यह रोग किलनी (रिपीसिपेलस) के काटने से फैलता है। यह रोग अधिकतर मवेशियों में पाया जाता है, इसके अलावा कुत्ते एवं घोड़े में भी पाया जाता है। यह परजीवी पशुओं की लाल रक्त कणिकाओं में विभाजन करके खून की कमी कर देते है, जिसे एनीमिया के नाम से जाना जाता है। इसके कारण रोगी पशु को तेज बुखार, कमजोरी, पीलिया और पशु के मूत्र का रंग बिना दूध की चाय जैसा हो जाता है। समय पर उपचार न मिलने की स्थिति में यह रोग जानलेवा साबित हो जाता है।

थायलेरियोसिसः यह रोग थायलेरिया एनुलाटा नामक रक्त परजीवी से होता है। यह रोग अधिकतर संकर एवं विदेशी नस्ल के मवेशी में पाया जाता है। इस रोग का परिवहन हायलोमा एनाटोलिकम किलनी द्वारा होता है। यह परजीवी पशुओं के लिम्फोसाईट (सफेद रक्त कणिकाएं) में विभाजन करता है जिससे पशु के शरीर में खून की कमी हो जाती है। इस रोग के लक्षण तेजी से बुखार आना, कमजोरी व सतही लसिका ग्रंथियो में सूजन आना आदि प्रमुख है। इस रोग के लिए बाजार में रक्षावेक–टी नामक टीका उपलब्ध है, जिसे दो से तीन माह के जानवरों को लगवाना चाहिए।

एनाप्लाज्मोसिसः यह रोग ऐनाप्लाज्मा मार्जिनेल रक्त परजीवी द्वारा होता है। इस रोग से वयस्क जानवर अधिक प्रभावित होते है। यह परजीवी लाल रक्त कणिकाओं को लक्ष्य करके पशु को एनिमिक कर देता है। इस रोग का संक्रमण किलनियों से होता है। इस रोग से पीड़ित पशु का पित्ताश्य अधिक प्रभावित होता है, इसलिए इस रोग को पित्ताश्य रोग के नाम से भी जाना जाता है। समय पर उपचार न मिलने की स्थिति में यह रोग घातक साबित होता है। बाजार में इस रोग के प्रति टीका एनावेक एवं एनाप्लाज के नाम से उपलब्ध है जिसे पशुचिकित्सक की सलाह पर सही समय से युवा व वयस्क पशुओं को लगवाना चाहिए।

ट्रायकोमोनियोसिसः यह रोग ट्रायकोमोनास फीटस नामक परजीवी से होता हे। इस रोग का संक्रमण संक्रमित बैलों के द्वारा एवं बढ़ते हुए कृत्रिम गर्भाधान में संक्रमित वीर्य द्वारा होता है। इस परजीवी से गायों में संक्रमण होने की दशा में गर्भावस्था के पहले चरण में ही गर्भपात हो जाता है।
ऐंसे जानवरों को गर्भपात के बाद दो से तीन महीने का आराम देना चाहिए और साथ साथ ही उचित समय पर पशुचिकित्सक की परामर्श से उपचार करवाना चाहिए, जबकि संक्रमित बैलों को कृत्रिम गर्भाधान हेतु उपयोग में नहीं लाना चाहिए। इस रोग के लिए बाजार में ट्रिचगार्ड के नाम से टीका उपलब्ध है।

कोक्सिडियोसिसः यह रोग प्रमुख रूप से आईमीरिया टीनेल्ला परजीवी द्वारा दो से चार सप्ताह के चूजों में देखने को मिलता है। इस रोग का प्रसारण दूषित खाने पीने से होता है। इस रोग से प्रभावित मुर्गियों में खूनी दस्त, कमजोरी, कब्ज व पेट दर्द और लगातार वजन गिरने से ग्रसित मुर्गियों की मृत्यु भी हो जाती है। एक साथ संपूर्ण झुण्ड में संक्रमण होने पर पूरे झुण्ड का सफाया हो जाता है। इसलिए इस रोग के बचाव हेतु मुर्गियों का टीकाकरण आवश्यक है और बीमार मुर्गियों को स्वस्थ्य मुर्गियों से अलग रखना चाहिए। बीमार मुर्गियों को पशुचिकित्सक की सलाह से पानी और भोजन के साथ एंटीकाक्सीडियल इलाज देना चाहिए।

क्रिप्टोस्पोरोडियोसिसः यह रोग क्रिप्टोस्पोरेडियम पारवम परजीवी द्वारा होता है। यह परजीवी दूषित खाद्य एवं पेय पदार्थ के द्वारा आंत को प्रभावित करता है। यह रोग तीन माह से कम के बछड़ों में अधिक देखने को मिलता है। प्रभावित बछड़ों में पतला दस्त के साथ साथ वजन में गिरावट देखने को मिलता है।

रोकथाम एवं नियंत्रण

1. पशुओं को रक्त चूसने वाली मक्खियों व किलनियों से बचाने हेतु मच्छरदानी, पशुओं के आसपास नीम के पत्तों का धुआं करना चाहिए।
2. पशुओं को स्वच्छ आहार एवं पीने को पानी देना चाहिए एवं बाड़ों की नियमित साफ–सफाई जैसे कि गोबर और मलमूत्र को बाहर गढ्ढों में फैकना चाहिए।
4. बीमार पशुओं को सही समय से पशुचिकित्सक की सलाह से इलाज एवं टीकाकरण करवाना चाहिए।
5. रोग प्रतिरोधी नस्लों जैसे कि एंडामा, मटरू आदि के लिए किसान भाई को प्रोत्साहित करना चाहिए।

3) कीड़े और किलनियों का संक्रमणः खाद्य एवं कृषि संगठन के अनुसार दुनिया की 80 प्रतिशत मवेशी किलनियों के संक्रमण से ग्रस्त होती है। इसके साथ मक्खियाँ और किलनियाँ दुधारू पशु के सामान्य व्यवहार को गुस्सैल बना देते हैं जिससे दुग्ध उत्पादन में कमी आना एवं साथ साथ पशु को उत्तेजना में चोट लगने की भी संभावना होती हैं। इसलिए पशु से दुग्ध लेने से पहले ब्रश से पशु की अच्छी तरह से साफ सफाई करनी चाहिए। किलनियों के साथ साथ जुए भी पशुओं को गंभीर हानि पहुंचाते हैं। क्योंकि ये पशु का खून पीने के साथ–साथ शरीर पर काटते भी है जिससे पशु खिसिया जाता है और दूध दुहने के बीच में ही उछल जाता है। रात को जुए के द्वारा काटने से जानवर ठीक से सो नहीं पाता है। दिन में पशु अच्छे से दाना चारा नहीं खा पाता है जिससे जानवर दिन व दिन दुबला पतला होता जाता है एवं अन्य बीमारियों के लिए अति संवेदनशील रहता है। जुए का प्रकोप सभी जानवरों में देखने को मिलता है, मुर्गियों में ये पिस्सू उनकी पंख एवं उपरी सतह पर रहते हैं और खून पीते रहते हैं, अतः मुर्गियों को कमजोर बना देते हैं जिससे मुर्गीपालन में आर्थिक रूप से हानि पहुंचाते हैं। घरेलू जानवरों में खुजली एक आम समस्या है जैसे कि कुत्तों में डीमोडेक्स केनिस द्वारा जबकि मवेशियों, भेड़ एवं बकरियों में सारकोप्टस द्वारा होती हैं। ये परजीवी पशु को बेचौन कर देते हैं, जिससे पशु उत्तेजित हो जाता है एवं लगातर एक ही जगह खुजाते–खुजाते शरीर पर घाव बन जाते हैं, त्वचा मोटी हो जाती हैं ओर प्रभावित भाग के बाल गिर जाते हैं।

उपचार एवं रोकथाम

1. प्रभावित पशुओं को पशुचिकित्सक की सलाह पर कीटनाशक दवाई जैसे स्प्रे, पाउडर आदि का छिड़काव करना चाहिए।
2. डेल्टामेथरिन 0.5 से 0.8 प्रतिशत घोल का उपयोग करना चाहिए।
3. यदि संक्रमण को बहुत दिन हो गए हैं उस दशा में आइवरमेक्टिन इंजेक्शन लगवाना चाहिए।
4. इसके साथ–साथ एंटीसेप्टिक साबुन से हर रोज जानवरों को नहलाना चाहिए।
5. साथ–साथ पशुओं को अच्छा खाना पीना भी देना चाहिए व आसपास की साफ सफाई पर ध्यान देना चाहिए।

ARTIFICIAL INTELLIGENCE
IN VETERINARY MEDICINE

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Artificial intelligence (AI) is an important technological advancement that is shaping our lives. AI is a branch of computer science devoted to creating systems to perform tasks that would normally require human intelligence. [1]Veterinary medicine, on the other hand is an exciting, broad and growing discipline that includes topics such as companion animal health, population medicine, zoonotic diseases and agriculture. [2]The implementation of and adaptation to AI is bound to profoundly reshape the practice of veterinary medicine.

AI is used by many of the largest companies in the world. It powers mobile applications, offer audio / video suggestions and even predict the next word when we text messages. The opportunities to leverage the power of AI to improve our quality of life seem endless.
Nowhere is this opportunity more apparent than in medical practice. In particular, AI has contributed significantly in the field of diagnostic imaging where technologies have been developed to aid in diagnosis and support radiologists. A similar shift is occurring in veterinary medicine. AI has the potential to reshape how veterinary medicine is practiced.

AI is a valuable tool that can help veterinarians do their jobs with greater speed and precision, freeing them up to focus on complex tasks and concentrate on patient welfare.

Some have used it to predict seizures from intracranial EEG signals in dogs [3]while others have used it to extrapolate atrial fibrillation disease progression using data sets collected from endocardial electrograms of dogs [4]AI also has been able to classify a variety of behaviors from accelerometer readings from approximately 2500 dogs [5]Pathogen detection from blood smears has been attempted too with an accuracy of 97% [6]Also, a model for detection of aggregate reticulocytes in cat blood smears has been done with 98.7% accuracy [7]AI is still in its nascent stages but will likely have a profound impact on the veterinary profession in the years to come. Therefore, it is vital that all veterinarians understand both the promise and limitations of AI. It is not necessary for the veterinary practitioner to have a working knowledge of computer programming to effectively use and implement AI. However, implementing AI is analogous to the implementing of a diagnostic test in practice.

Potential applications of AI in veterinary medicine

AI was heavily researched in the second half of the 20th century. With advancements in computer processing power in the past decade, digitization and availability of data, AI has taken off. In medicine, this data pertains to medical imaging such as radiographs, CT, and MRIs, bloodwork results, cytology and histology. A major application of AI is to get insights from these massive data sets with the aid of computer algorithms.

These AI algorithms 'learn by example' whereby it finds patterns in patient medical data that distinguish a target patient from a large universe of non target patients. When applied to prediction, AI algorithms analyze data as a collection of predictors (or features) that may guide a model in its decision making.

There are some areas where AI can help such as clinical disease prediction, precision medicine and translational research and clinical trials. AI has brought great reforms in veterinary medicine. It has made veterinary diagnostics easier, medical care accessible and data collection convenient.

Clinical disease prediction and precision medicine[2]

Treatment decisions such as new therapy initiations or therapy escalation in the event of disease progression are complex, multifaceted, and may occur over a

narrow window of time. AI is a well-suited tool to identify patients who may experience disease progression and enables the precision needed for targeted outreach. Due to our growing ability to process ever larger and more complex data sources, AI models can now use the presence and interplay of clinical events to predict which patients are likely to progress as well as use the timing of these events to inform when progression may occur. The ability to integrate the timing of events also allows insights from AI to be proactive rather than reactive, resulting in targeted and timely interventions.

Addressing workload in veterinary clinics[2]

Stress in Veterinary Practice has steadily increased and contributed to adverse health effects amongst Veterinarians. One possible way by which this can be tackled is to leverage decision support tools powered by AI. This approach is very much possible in companion animal practice setting. Speech recognition software is commonly integrated with human health records systems to enable efficient text entry into the patient record. Similar approaches can be easily adopted in veterinary medicine in the companion animal hospital setting.

Conducting translational research and clinical trials[2]

With One Health paradigm of human and animal care, there are lot of opportunities of leveraging AI for translational research. Multidisciplinary collaborations among laboratory and clinical researchers as well as different communities in pursuit of more effective treatments and best practices is possible. Approaches could be explored in common diseases of humans and companion animals such as zoonotic and infectious diseases.

Conducting clinical trials in veterinary medicine has a number of challenges, including patient recruitment, funding support, rapid adoption of technologies and treatment regimens that preclude their clinical evaluation and testing, and the impracticalities of conducting trials in the veterinary setting. In silico, or virtual, clinical trials can be used to replace traditional preclinical trials and in vitro experiments. Such trials offer an alternative to the conventional clinical trial. In this approach, virtual animals in the in silico trial receive a virtual treatment and observations are recorded on the basis machine learning models of patient sensitivities and responses.

It is clear to see that AI is moulding itself into being an essential and irreplaceable part of veterinary science. Whether it involves bringing new technology in veterinary medicine or improving data-recording practice, AI has done it all. AI promises to improve the quality of life of animals and those who care for them. Now, imagine what it would be like in the future. In just the veterinary sector, there is the possibility that diagnostics, and even consultation, may become fully automated. We can only say now that as AI will evolve and change, so will the veterinary industry.

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DYSTOCIA DUE TO UNILATERL SHOULDER FLEXION IN A NON-DESCRIPT DOE : A CASE REPORT

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Abstract

The present communique reports a case of dystocia in a local non-descript doe due to shoulder flexion along with its successful management.

Keywords: dystocia, shoulder flexion, mutation, traction

Introduction

The fetal causes of dystocia are more numerous of which the commonest are postural defects of head and forelimbs in ruminants (Arthur et. al., 1996). The incidence of postural abnormalities has been reported between 63 to 69 % in small ruminants (Purohit et al., 2006). The observed incidence of unilateral carpal or shoulder flexion was 11.4% of 3,873 beef cattle calving (Holland et. al., 1993). Per-vaginal delivery with the help of obstetrical manoeuvres like mutation and forced extraction is preferred to economize the treatment cost of the farmers by avoiding the caesarian operation (Ahmed et al., 2015). The present communique reports a case of dystocia in a local non-descript doe due to shoulder flexion along with its successful management.

Case history and observations

A four year old, full term pregnant doe was presented to Teaching Veterinary Clinical Complex (TVCC), Rajendranagar, Hyderabad with history of straining for more than 4 hours. The first water bag was already ruptured and progression of the head and one limb was noticed at vulvar orifice. The animal was in standing position and clinical examination revealed that the fetus was present at vulvar opening in anterior longitudinal presentation, lumbo-sacral position with the head and right forelimb protruding out of the vulva. The per-vaginal examination revealed that the fetus was live with shoulder flexion of left forelimb.

Treatment and Discussion

The extended right fetal forelimb along with head was repelled into the uterus to create space for manipulation. Since the cervix was fully dilated, lubricated hand was inserted into the uterus and flexed limb was grasped and converted into carpal flexion position, then the foot was brought into pelvis by cupping with hand. The live fetus was then manually delivered by applying moderate traction on head and both forelimbs (Fig. 1).

Second fetus which was in anterior presentation was also delivered by gentle traction. Therapeutic management of the doe included Injection Amoxicillin-15mg/kgb.wt I/M, and Injection Meloxicam-0.5 mg/kg b.wt I/M daily for 3 consecutive days to combat bacterial infection and inflammation, respectively. The case showed uneventful recovery.

Fig. No. 1 Image showing doe with two live fetuses successfully relieved after manual correction

Discussion

Dystocia due to fetal maldispositions is usually corrected manually (25.2%) and only a small number (1.1%) may require caesarean section (Sobiraj, 1994). Moreover, great care must be exercised in correction of such cases to avoid damages to the uterine wall (Jackson, 1995). Fetal foot was cupped with hand to prevent damage to uterine wall while correction of shoulder flexion. Manual correction of the deviation is possible in sheep and goat with sufficiently dilated birth canal and in cases presented timely with live fetuses (Ahmed et al., 2015). It may be difficult in cases presented beyond 24 hrs of 2nd stage of labor (Mehta et al., 2002). In the present case, live fetus was delivered successfully due to timely presentation of the case and prompt correction of the malposture without any complications.

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MONKEYPOX

A Global Emerging Viral Zoonosis

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Introduction

Monkeypox is a viral zoonosis of global public health importance manifesting symptoms similar to the patients of smallpox, although it is clinically less severe and rarely fatal. Monkeypox virus belongs to the family of variola virus (etiological agent of smallpox). The first human case of monkeypox was recorded in 1970. Monkeypox as per epidemiological statistics shows occurence in the Central and the West Africa, often in proximity to tropical rainforests, and has been increasingly appearing in urban areas. In past decades, most of monkeypox cases outside Africa were linked to international travel or through imported animals.

The pathogen - Monkeypox virus

Monkeypox virus is an enveloped double-stranded DNA virus that belongs to the Orthopoxvirus genus of the Poxviridae family (Fig.1 and Fig.2). There are two distinct genetic clades of the monkeypox virus, the Central African (Congo Basin) clade and the West African clade.

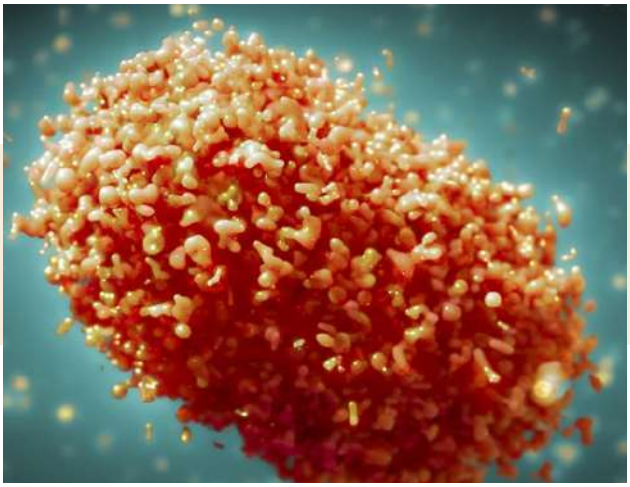

Fig.1 Ultramicroscopic View of Monkeypox Virus

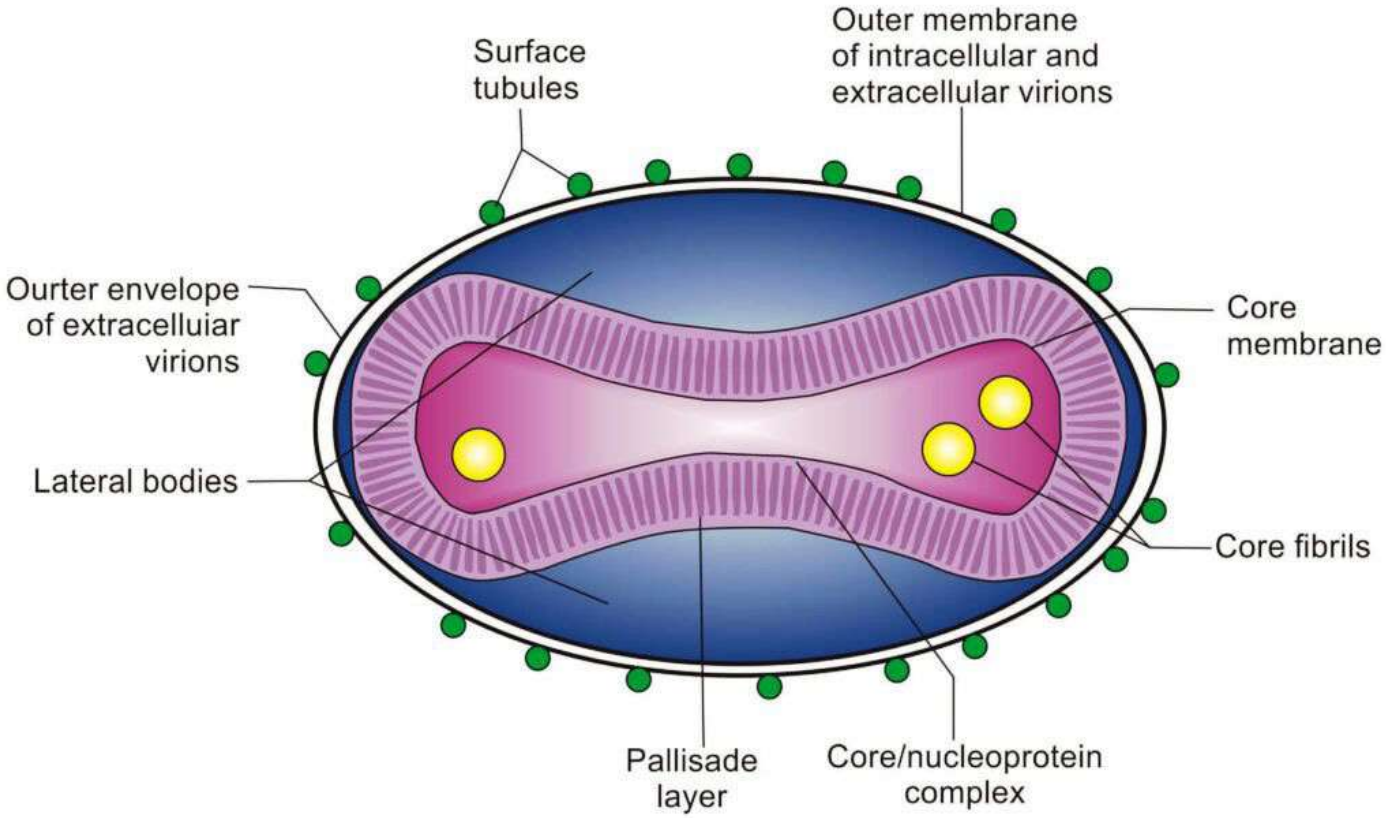

Fig.2 Detailed Structure of Monkeypox Virus

Natural host of Monkeypox Virus

Monkeypox was discovered in 1958 when two outbreaks of a pox-like disease occurred in colonies of monkey kept for research. Despite being named "monkeypox", the source of the disease remains unknown. However, African rodents and non-human primates (like monkeys) might harbor the virus and infect people. Various animal species have been identified as susceptible to monkeypox virus. This includes rope squirrels, tree squirrels, gambian pouched rats, dormice, non-human primates and other species. Uncertainty remains on the natural history of monkeypox virus and further studies are needed to identify the exact reservoir(s) and how virus circulation is maintained in nature.

Outbreaks

Human monkeypox was first identified in humans in 1970 in the Democratic Republic of the Congo in a 9-month-old boy in the region where smallpox had been eliminated in 1968. Since then, most of the cases have been reported from rural rainforest regions of the Congo Basin, particularly in the Democratic Republic of the Congo and human cases have increasingly been reported from across Central and West Africa. In 2003, the first monkeypox outbreak outside Africa was reported in the United States of America linked to the contact with infected pet prairie dogs. Monkeypox had also been reported in travelers from Nigeria to Israel in September 2018, to the United Kingdom in September 2018, December 2019, May 2021 and May 2022, to Singapore in May 2019, and to the United States of America in July and November 2021. In May 2022, multiple cases of monkeypox were identified in several non-endemic countries. The first case of the monkeypox virus was being reported in India in July 2022 after a UAE traveller returned back to Kerala.

Symptoms

The incubation period of monkeypox is usually from 6 to 13 days but can range from 5 to 21 days. Symptoms of monkeypox may include:

- Fever
- Headache
- Muscle aches and backache
- Swollen lymph nodes
- Chills
- Exhaustion
- A rash that can look like pimples or blisters that appears on the face, inside the mouth, and on other parts of the body, like the hands, feet, chest, genitals, or anus

Fig.3 Gross Lesions of Monkeypox Virus

The virus can spread from person-to-person (Fig.4) through:

- Direct contact with the infectious rash, scabs, or body fluids.
- Respiratory secretions during prolonged, face-to-face contact, or during intimate physical contact, such as kissing, cuddling, or sex (95% of monkeypox cases transmitted through sexual activity).
- Inanimate objects such as clothing or linens of affected person.
- Pregnant people can spread the virus to their fetus through the placenta.

The virus can spread from animal-to-human (Fig.4) through:

- Animal-to-human (zoonotic) transmission can occur with direct contact via blood, body fluids, or cutaneous or mucosal lesions of the infected animals.
- It may also be transmitted via infected animals to humans, either by being scratched or bitten.
- By consuming or handling of infected animal products.

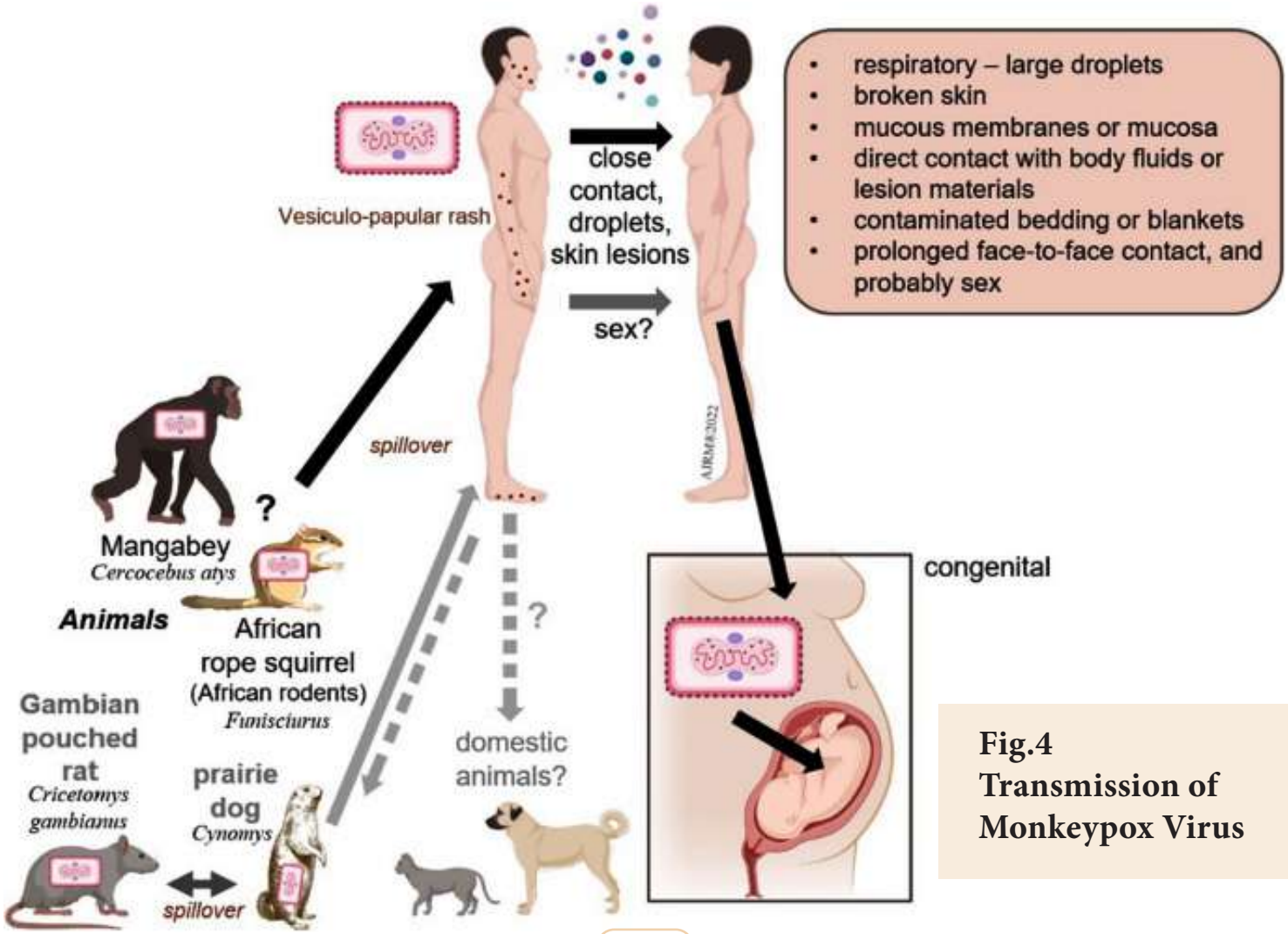

Fig.4
Transmission of Monkeypox Virus

Prevention steps

As we know, "prevention is better than cure" take the following steps :

- Avoid close, skin-to-skin contact with people having a rash that looks like monkeypox.
  - Do not touch the rash or scab of a person affected with monkeypox.
  - Do not kiss, hug, cuddle or have sex with someone affected with monkeypox.
  - Do not share utensils or cups with a person affected with monkeypox.
- Do not handle or touch the bedding, towels, or clothings of a person affected with monkeypox.
- Wash your hands often with soap and water or use an alcohol-based hand sanitizer.
- Avoid contact with animals that can spread monkeypox virus, usually rodents and primates. Also, avoid sick or dead animals, as well as bedding or other materials they have touched.
- Only people who are at risk (for example someone who has been a close contact of someone who has monkeypox) should be considered for vaccination.

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LUMPY SKIN DISEASE

A CLINICAL UPDATE

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The lumpy skin disease (LSD) is a viral disease of cattle caused by lumpy skin disease virus (LSDV). It is a transboundary disease of bovines with variably high morbidity and mortality rates in cattle resulting in economic loss to the farmer. The morbidity rate is relatively low, the Asian water buffalo are also reported to be susceptible for the virus. The World Organization for Animal Health categorizes LSD as a notifiable disease.

EPIDEMIOLOGY

The disease was observed for the first time in Zambia in 1929 and spread rapidly in the cattle population across African countries. But in recent past, the disease has spread to the European part of Turkey and Greece. Since 2019, the LSD is spreading across Asia in epidemic proportions from Bangladesh. According to a risk assessment report by FAO, till now the disease spread has been documented in seven countries, viz., China and India (2019), Nepal, Taiwan, Bhutan, Vietnam and Hong Kong (2020). At least 23 Asian countries are now at risk of LSD, which is emerging as a trans-boundary animal disease. In India, the disease has spread to 15 states within just 16 months. After the first report in Odissa, the prevalence and outbreaks are seen in most states with varied morbidity and mortality.

VIRUS TRANSMISSION

The causative agent, lumpy skin disease virus is a capripox virus, that is closely related to, but phylogenetically distinct from the viral causes of sheep and goat pox. LSDV is highly contagious and can be transmitted by close

contact with infected or asymptomatic carrier animals, contaminated feed and water, or by many blood-feeding arthropod vectors. Arthropod vectors have been reported to transmit disease from Egypt to an area some 200 km away in Israel. This incident was quite alarming as the disease crossed boundaries despite the fact there was no movement or trade of animals between either nation. Biting flies, ticks and mosquitoes of different species are believed to be primarily involved in mechanical transmission of disease. Stomoxy calictrans and Biomyia fasciata are some of the biting flies responsible for vector borne pathogenesis of this disease. Rhipicephalus decoloratus, Rhipicephalus appendiculatus, and Amblyomma hebraeum are ticks that also function as reserviors of LSDV, while mosquitoes such as Aedes natrionus and Culex mirificens are mainly involved in physical transmission of the disease. Apart from these routes of transmission the disease is also spreading as a transboundary infection mostly from the Nepal and Bangladesh and also from the neighbouring states of the country. High morbidity rates resulting from the introduction of the disease to new areas have had dramatic effects on rural smallholder livelihoods that are dependent on cattle production, in addition to impacts caused by human reaction. Uncontrolled livestock movement has been implicated in the long-range transmission of LSDV and could have been a crucial factor for its spread into and through India.

PATHOGENESIS

The LSD virus after entering the host either by vector bite or direct contact, exhibits a short period of viraemia, before it replicates within the skin and mucous membranes. The virus thus reaches the lymph nodes, through blood stream it spreads to other organs or systems like GIT and pulmonary parenchyma, mammary tissue and uterus. In recent years, LSD has spread from its African origins into eastern and Mediterranean Europe and central and southern Asia, reaching India in November 2019.

Viruses first replicate in epithelial cells at the site of entry and produce a localized infection, often with associated virus shedding directly into the environment from these sites. The spread of infection along epithelial surfaces occurs by the sequential infection of neighbouring cells, which, depending on the individual virus, may or may not precede spread into the adjacent subepithelial tissues and beyond. In the skin, papillomaviruses and poxviruses such as orf virus remain confined to the epidermis, where they induce localized proliferative lesions, whereas other poxviruses such as lumpy skin disease virus spread widely after

cutaneous infection to involve other organ systems. Viruses that enter the body via the respiratory or intestinal tracts can quickly cause extensive infection of the mucosal epithelium, thus diseases associated with these infections progress rapidly after a short incubation period.

CLINICAL SIGNS

Lumpy skin disease of cattle is characterized by fever, followed shortly thereafter by the development of nodular lesions in the skin that can cover the entire body. The primary manifestations start with a short span of moderate to severe fever. This is accompanied by increased nasal and pharyngeal secretions, lachrymation, enlargement of lymph nodes, anorexia, dysgalactia, general depression and a disinclination to move. Nodules have been reported on the neck, nares, muzzle, back, legs, perineum, scrotum, eyelids, ears, nasal mucosa, and tail, within 1–2 days, which gradually become harder and necrotic thereby inducing severe discomfort, pain and lameness. A characteristic inverted conical zone of necrosis has been described. Oedema of the face, brisket and limbs is sometimes seen. Generalized lymphadenitis and edema of the limbs are common. During the early stages of the disease, affected cattle show lacrimation, nasal discharge, and loss of appetite. The skin nodules involve both the dermis and epidermis; they are raised and later ulcerate, and may become infected secondarily. Ulcerated lesions may be present in the mouth and nares. Healing is slow and affected cattle often remain debilitated for several months. In 2–3 weeks, the nodules either regress, or necrosis of the skin results in hard, raised areas (sit-fasts) clearly separated from the surrounding skin. Some of the sit-fasts may slough away, leaving a full skin thickness hole in the skin which usually gets infected by bacteria or becomes liable to myasis. Some animals become extremely emaciated, and euthanasia may be warranted. Besides, the bulls may become temporarily or permanently infertile and may secrete the virus for a prolonged period.
Insect and tick bites, bovine herpesvirus 2 diseases (pseudo-LSD and bovine herpes mammilitis) and parapoxvirus diseases (bovine papular stomatitis) are generally considered as differential diagnoses for LSD.

DIAGNOSIS

Tentative diagnosis can be established based on the typical clinical signs, enlarged superficial lymph nodes and generalized nodular skin nodules observed on face, eyelid, neck, muzzle, nostrils, udder, limbs. Skin biopsy sample can be

collected for further confirmation of disease. Samples should be transported in transport medium with 20 to 50% glycerol in phosphate buffer saline. Serological tests are considered non-specific due to antigenic similarities between members of genus capripoxvirus and parapox. Real-time PCR may be used for LSDV detection. In contrast to conventional gel-based PCR, real time PCR is far more efficient.

TREATMENT AND CONTROL

Till date no effective treatment against LSD has been developed. As it is a viral disease, to avoid the complications associated with secondary invaders, broad spectrum antibiotics that had affinity towards soft tissues, skin and pulmonary parenchyma like lincomycin and sulfa drugs are advised. Antipyretics and anti-inflammatory and other supportive drugs can be given. Effective control and preventive measures such as; restricted movement of the infected animals, quarantined for inspection of the suspected animals to prevent the rapid spread of disease. Restrict vector movements and vector control methods like use of vector traps, use of insecticides can also be used for preventing the disease. Vaccination (ring vaccination) using the goat pox vaccine provide cross protection to the LSD virus.

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IVA NEWS

- State Veterinary Council of Tamil Nadu launched a pathbreaking App (both Android and IOS) "Kalnadai Maruthuvar', meaning Veterinary Doctor. The app will enable farmers to have location of willing vets who have agreed to rendere there services. This will also help the farmers and animal keepers to avoid Quacks.

- On 29/8/22 a Condolence gathering was organized by Indian Veterinary Association (IVA) on the sad demise of Dr.R.S.Sharma Ex-President (1996-2019), Indian Veterinary Association. Dr. R. S. Sharma left us for heavenly abode on 10 th August, 2022. The condolence gathering at the office of Indain Veterinary Association, HQ, New Delhi was attended by Dr. Kulshestra, Ex Treasurer, IVA, Dr. Rakesh Singh, Director(AH), Dr. L.C. Das Ex Director (AH) & Office bearers of Delhi Veterinary Association (DVA) and Veterinary Doctors of Delhi. In the remembrance of late Dr. R. S. Sharma every one emphasized on professional dedication and unity. Dr. Umesh Chandra Sharma, President, IVA on behalf of all Veterinarians of the country paid homeage to the departed soul.

- Indian Veterinary Association (IVA) on the event of World Rabies Day 28th Sept- 2022 with a motto of 'Zero by 2030 & Elimination of Dog mediated Rabies by 2030' had undertaken a month long activity to spread awareness about Rabies among schools kids and teens (potential suspected group of dog bite) throug demostration/nuker natak and other IEC activities. Till now four schools of Delhi had been covered:

1. Adarsh Public school, Bali Nagar
2. Adarsh Public school, Uttam nagar.
3. BVM Public School, Nazafgarh.
4. BVM World School, Nazafgarh.

These activities were carried out in associations with volunteers from 'yogismita' dance and drama group.

My College My Pride Campaign

On 26th August 2022, in a graceful ceremony at Vety. College Mhow, Dr. U.C. Sharma, President VCI, New Delhi, launched "My College My Pride Campaign" under the banner of VCI New Delhi. On this auspicious occasion Dr. R.K. Mehiya, Director AH & Dairy, Madhya Pradesh, Dr. Anupam Agrawal, IVA, Dr. B.P. Shukla Dean, along with professors and other officers of vety. college Mhow were present. This campaign will be implemented at National level for whole of the year 2022-23. All the Veterinary alumni of the country are hereby requested to celebrate and participate actively in this campaign for the prestige and development of their respective college and university.

"SHAKTI - 2023"

Second Annual Congress of IVA Lady Wing

ANNOUNCEMENT

Indian Veterinary Association (IVA) feels extremely elated to announce the second annual congress of IVA Lady Wing which will be held on 20th and 21st January 2023 at Nagpur, Veterinary college Maharashtra. IVA Lady Wing convener Dr. Lakshmi Srinivasan will be the coordinator for the event.

- In the Haryana state Veterinary Council elelction Dr. Rajiv Bangar, Dr. Sukhdev Rathee, Dr. Vivek Attri and Dr. Shekhar Yadav won the elections & became esteemed members of Haryana State Veterinary council.

- Veterinary Council of India (VCI) after taking inputs from all stake holders, including State Govt., State Vety. Councils, State Vety. Association, private Practitioners, Animal & Socially aware activist, NGOs had finalized the draft of Minimum Standards of Veterinary Practise Regulation (MSVPR).

Also a series of regional meetings were held to collect inputs. After receiving inputs in the most democratic manner from the grassroots the committee had finalized the MSVPR and the same had been submitted to Govt of India on 22/7/22 for approval.

While our nation is celebrating 75 years of independence, our nobel profession still lacks minimum standards for Hospital, Dispensaries, Polyclinics and other such Units. It will be a paradigm shift in the our profession when enacted Government under IVC ACT 1984 Sec 66 (m). Also there are clauses for subsequent amendment of MSVPR as and whenever required.

- Punjab Government increases stipend for Veterinary internships (Internship allowance)from INR 6200.00 to INR 15000.00. Veterinary students was demanding internship allowance as per medical allowance.

- In a meeting of all distt presidents and distt general secretaries which was held at Ludhiana to elect new Punjab State Veterinary Officers Association (PSVOA) state body. With the consent of 16 district executive bodies, following state body was elected.

- **Chief Advisor**
  Dr. Amit Nain

- **President**
  Dr. Puneet Malhotra

- **Sr. Vice-President**
  Dr. Harvinder Singh

- **Vice-President**
  Dr. Sarabdeep Singh
  Dr. Tejinder Singh
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  Dr. Munish Julka

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- **Legal Secretary**
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- **Organising Secretary**
  Dr. Gopal Krishan
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  Dr. Harmandeep Singh

- **Continuous Veterinary Education (CVE)**

Indian Veterinary Association in collaboration with Vetscope, Japan has launched a CVE programme on Veterinary Dermatology for free for Veterinarians of India. It has launched a series of lectures (pre recorded) by international experts in that arena/field.

We earnestly feel that it will be beneficial for Vets to upgrade their knowledge. As it is pre recorded the course can be done at any leisure/covinient time.

INVITING ATICLES, NEWS ETC....

Vet Vision the e-Magazine of INDIAN VETERINARY ASSOCIATION invites articles, news etc on a topic of relevance for veterinary profession. Members may contribute any news item that is felt very relevant to the profession and must be a significant one suitable for publication such as -

1. Reportable clinical cases.
2. Popular articles with matter of veterinary relevance.
4. News - significant National and International events or news relevant to veterinary profession.
5. Industry news; pharma/dairy/small ruminants/pet animals/mono gastric animals etc.
6. Statistics emphasising about vet contribution.
7. Refresher topics- any topic relevant to veterinary profession in a brief and understandable format.
8. VCI and IVA news.
9. Vet achievements.
10. Vet talent- innovative creations, like puzzles, quizzes, etc.
11. A topic for debate on a most relevant policy or an issue (topic will be put open for healthy discussion among the members).
12. You ask, we answer (answers by specialists having vast experience in the concerned fields).

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