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Short Communication

A CASE REPORT OF TROPICAL THEILERIOSIS AND ITS TREATMENT

Arindam Samanta[1] and Basudev Dutta[2]

Tropical theileriosis is an important disease of exotic cattle and their cross-bred progeny, leading to morbidity and mortality especially in calves, causing considerable economic losses. Tick-transmitted Theileria parasites of cattle are a major constraint to the improvement of the livestock industry in large parts of the World. Tick and tick transmitted diseases are well known to assume serious dimensions of large scale cross breeding programme in tropical countries. Tropical theileriosis caused by *Theileria annulata,* because of its fatal nature has been considered as a single most important constrain to cross-breeding programme in India (Uilenberg 1982). The present paper deals with clinical signs, diagnosis and treatment of bovine theileriosis in the crossbred Jersey cattle.

A crossbred cow in her third parity was suffering from high rise of body temperature (104^0 - 106^0 F) for 15 days. It was off-fed with detoriation of health and production during the period. The animal was treated symptomatically by the owner without any response. Then the ailing animal was brought to Block Animal Health Centre, Amta-II, Howrah District, West Bengal.

During clinical examination, the cow was lethargic with moderate loss of body condition. Mucous membrane of both eyes were slightly pale with swollen pre-scapular lymph nodes. No significant changes were detected during auscultation of both lungs. Heart rate was found 90 and respiration rate 25 per minute.

The owner reported that the cow produced 6(six) liters of milk per day before the onset of disease, which sharply came down to only 1 (one) litter per day. Owner also reported that the animal voided loose stool occasionally. After careful examination, few ticks were found over the exterior coat of the cow. By correlating all these findings it was suspected as a case of blood protozoan infestation and blood smears were prepared aseptically from jugular vein, air dried and sent to Institute of Animal Health & Veterinary Biological (Research &Training), Kolkata, India for confirmatory diagnosis. Faecal sample was also collected for examination of internal parasites.

Microscopic examination of stained blood smears revealed presence of dot shaped haemoprotozoan parasites in erythrocytes. In few erythrocytes found some ring form of

[1] *Veterinary Officer, Block Animal Health Centre, Amta -II, Howrah, West Bengal, Pin - 711401, India.*

[2] *Assistant Director, ARD (Vety.), Institute of Animal Health & Veterinary Biologicals(R&T), 37, Belgachia Road, Kolkata - 700037, West Bengal, India.*

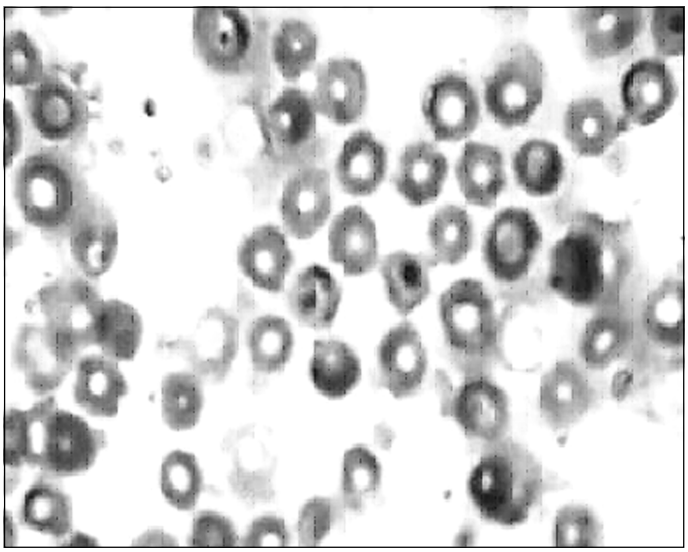

Fig.1 Piroplasmic form of *Theileria annulata* in a microscopic field of stained blood smear of a crossbred cow (Leishmain's stain 100X)

parasites. The parasite showed morphologically resemblance to *T. annulata* of cattle. Microscopical examination of faecal sample did not reveal any specific parasitic egg or oocyst.

On the basis of history, clinical examination and laboratory findings, it was confirmed that the cow was suffering from tropical theileriosis.

The cow was treated with intramuscular injection of buparvaquone (Inj. Zubion, Intas Pharmaceuticals Ltd.) @ 1 ml per 20 kg. body weight. Body temperature was subsided gradually within 48 hours but appetite did not regain fully. Then the animal was treated with Inj. Intalyte (Intas Pharmaceuticals Ltd.) @ 2 bottles intravenously per day and Inj. Tribivet (Intas Pharmaceuticals Ltd.) @ 15 ml intramuscularly for 3 consecutive days. Then the cow responded well and recovered uneventfully. Finally after 20 days, it returned to its original production *i,e* 6(six) liters milk per day.

The syndrome of persistent fever together with unilateral or bilateral visible swelling of

lymph nodes (prescapular, parotid or prefemoral) epitomized clinical theileriosis in most of the cases reported by Muhammad *et al.*(1999). Generally haemoglobuneria is not a feature of theileriosis and anaemia is due to erythrophagocytosis resulting from some autoimmune mechanism (Dhar and Gautam 1979, Lal and Soni 1985). The clinical signs in the present case were consistent with those reported by Goutam *et al.* (1970), Sharma and Goutam (1973), Bansal and Sharma (1989), Bagherwal (1989) and Sudhan *et al.* (1992). Buparvaquone was highly effective (98%) as reported by Singh *et al.* (1993). Buparvaquone was reported most effective chemotherapeutic agent alone or in combination with oxytetracycline (Muhammad *et al.* 1999, Bagherwal 1989, Khanna *et al.* 1983 and Dolan *et al.* 1992). Degeneration of theilerial piroplasms after administration of buparvaquone occurs over 1-4 days (Unsoren and Kurtededed 1988).This may account for time lag of 2-3 days between administration of buparvaquone and return of normal body temperature. An attempt to restore the negative energy balance in chronic cases after buparvaquone treatment, supplementation of glucose and B-complex were advised for quick recovery.

It may be conclude that only clinical examination is not sufficient for accurate diagnosis and treatment of tropical theileriosis. Through clinical examination along with good laboratory support is essential for proper diagnosis and treatment of tropical theileriosis.

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