

Babesiosis in Kankrej Cows at Chharodi Farm

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ABSTRACT

Babesiosis in Kankrej cows was reported at Chharodi cattle farm of Gujarat Agricultural University. The diagnosis was based on blood smear examination as well as post-mortem lesions characterized by icterus splenomegaly and dark coffee coloured urine in the urinary bladder. Berenil was found effective in controlling babesiosis. Ticks could be eradicated by gammexane and boric acid dry spray.

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INTRODUCTION

Amongst the common tick borne diseases in cattle, babesiosis appears to be the one that incur heavy economic losses to the farmers. With a world cattle population more than 1,000 millions, about three quarter of them are "at a risk" to tick borne diseases. The economic losses associated with these diseases and tick infestation are too great to visualize (Purnell, 1979). Bovine babesiosis which is the most common tick borne disease is of great economic importance on account of direct losses, cost of treatment and long period of convalescence in recovered animals. (Blood and Henderson, 1974). It occurs commonly as an endemic disease in the indigenous cattle in Gujarat and appears to be due to stress caused by intercurrent debilitating diseases, starvation, post-parturient and heavy lactational stresses. Clinical cases of babesiosis in cattle and buffaloes in India have been reported to be due to *Babesia bigemina* (Avasatthi and Hiregoudar, 1970; Dwivedi *et al.* 1976 & 1979). According to Mohan (1977) *B. bigemina* infection is widely

prevalent in Indian cattle. Incidence caused by *B. bovis*, *B. berbera* and *B. major* is however scarce in India. The present report is based on the incidence of *Babesia bigemina* infection in Kankrej cattle at the Gujarat Agricultural University Farm Chharodi having a strength of five hundred cattle.

MATERIALS AND METHODS

Five Kankrej cows showed high temperature up to 107°F. Other symptoms noticed were dyspnoea, suspension of rumination, depression and declined milk production. Blood smear examination revealed large number of *B. bigemina* in the erythrocytes. The animals were heavily infested with ticks which were identified as *Boophilus annulatus*. Some of them were *Rhiphicephalus* and *Hae-maphysalis* Spp. Postmortem examination was carried out on three animals. The survived animals were treated with Berenil at a dose rate of 1.6 gm/100 kg body weight and they recovered subsequently.

RESULTS AND DISCUSSION

Blood smear examination of the sick cows revealed large number of *B. bige-*

mina. The ticks transmitting these blood protozoans parasites were identified as *Boophilus annulatus*. The postmortum lesions of babesiosis were characterized by yellowish mucous membrane, enlargement of spleen with cut surface bulging out with dark red coloured soft pulp. The urinary bladder contained coffee coloured urine. The blood was watery and thin. Liver was enlarged and yellowish. The gall bladder revealed greenish granular bile. The myocardium showed petechial haemorrhages. Histopathological examination of the tissues revealed extensive haemorrhages accompanied by haemosiderosis in spleen, kidney, liver, lung and intestine.

The characteristic yellowish mucous membrane, profuse enlargement of spleen, coffee coloured urine and haemosiderosis microscopically were quite characteristic of babesiosis. The blood smear examination also revealed *B. bigemina* in the erythrocytes confirming the above postmortem diagnosis.

In the initial stage of the disease two of the sick animals were treated with Berenil intramuscularly. They were also injected with 450 ml of 20% dextrose intravenously and 5 ml of Belamyl intramuscularly. This treatment brought prompt recovery. The Manager of the Farm was advised to record the body temperature of the animals once in a day so that those showing high temperature could be promptly treated in

the above manner. He was also advised to spray gammexane and boric mixture to eradicate the ticks. The case was since then subsided and mortality was reported. It seems that bovine babesiosis is not uncommon in indigenous cattle. It was also found that Berenil was quite effective to curb the disease at the early stage itself. Gammexane and boric acids spray was proved to be quite efficient in eradicating the tick infestation.

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