SARCOCYSTOSIS IN AN INDIAN GAUR (*Baus gaurus*)

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Sarcocystis is a protozoan parasite often encountered as an incidental microscopic finding in the cardiac and skeletal muscles of variety of mammals, birds and reptiles (Kalyukin and Zasukhin, 1975). During the months of June, July and August 1995, there were reports of sporadic death of Indian gaurs in Parambikkulam wildlife sanctuary, Kerala. A detailed postmortem examination was conducted on one of the gaurs found dead in the Parambikkulam wildlife sanctuary (Thunakkadavu area) on 27.7.1995. Subcutaneous absceses and maggot wounds were the postmortem findings in that particular case. During the course of the investigation, no specific aetiological agent could be identified for the sporadic deaths in gaurs. Histopathological examination of the tissues taken from the gaur revealed cysts of sarcocystis in the cardiac musculature (Fig.1).

There are reports of bovine calves (*Baus taurus*) and mule deer fawns experimentally infected with *Sarcocystis fusiformis* and *Sarcocystis hemionilatrantis* showing clinical disease and subsequent death (Johnson *et al.* 1975 and Koller *et al.* 1977).

Koller *et al.* (1977) reported that fawns experimentally infected with *Sarcocystis hemionilatrantis* showed clinical symptoms from 18th day post infection. They showed pyrexia, weight loss, reluctance and stiff movement and started dying from the 27th day of infection onwards.

Sarcocystosis has been reported in Indian Gaur by Welch and Zimmer (1981). This report suggest that Indian gaurs are susceptible for sarcocystis infection. Other wild herbivores like sambar in Kerala forests have also been reported to get Sarcocystis infection (Gangadharan *et al.* 1992).

In the present case of Indian gaur, mature cysts of sarcocysts were recorded in the cardiac muscle. There was no cellular reaction around the cysts. The absence of cellular reaction around the cysts was responsible for neglecting its aetiological significance of this organism in causing clinical diseases in intermediate hosts like herbivores. However Johnson *et al.* (1975) and Koller *et al.* (1977) established that there are pathogenic species of sarcocystis like *S. fusiformis* and *S. hemionilatrantis* which can cause clinical disease and death in bovine calves and mule deer fawns respectively. Based on the above observations it can be surmised that wild ruminants like Sambar and gaur act as the intermediate hosts of sarcocystis and many species of wild carnivores may act as the final host to complete the life cycle of the two host parasite.

This observation warrants a detailed investigation to screen the carnivore population in the wildlife sanctuaries of Kerala and to isolate and characterise the species of sarcocysts involved and then elucidate the pathogenesis of the sarcocystis in wild ruminants.

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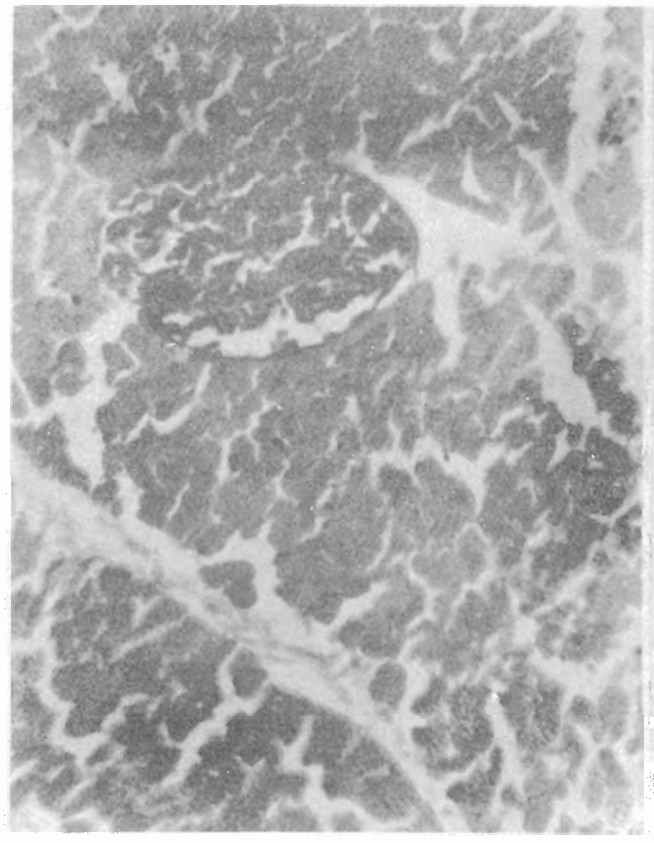

Fig. 1. Cyst of sarcocyst in the cardiac muscle

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