

## SARCOCYSTIS AND SARCOCYSTOSIS IN NEWLY BORN CALVES

By

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It has recently been discovered that muscular sarcocyst constitutes the intermediate stage in the life cycle of a group of obligatory heteroxenous disporic tetrazoic eimeriid coccidia. Ingestion of the muscular sarcocyst by the appropriate final host initiate gametogonic stages in the subepithelial layer of the small intestine. Fertilization of the macrogametes is followed by sporgony in situ resulting in the excretion of mature disporic tetrazoic occysts or free mature sporocysts with the stools of the final host for prolonged period of potency. Ingestion of these fecal forms by the specific intermediate host initiate schizogenic development in the visceral organs, followed by the invasion of the muscular tissue and formation of the sarcocystic stage. It has been proved that cattle harbour 3 Sarcocystis species namely S. cruzi (S. bovicanis) for the cattle - dog cycle, S. hirsuta (S. bovifelis) for the cattle - cat cycle, S. hominis (S. bovi-hominis) for the cattle - man cycle. Two Sarcocystis species were recorded from water buffaloes namely S. fusiformis for the buffalo cat cycle and S. levini for the buffalo dog cycle. Of the 3 known bovine sarcocysts species only the cattle dog parasite is markedly pathogenic if large numbers of sporocysts were ingested by calves. An acute disease and death developed in calves after 26-33 days from oral inoculation with sporocysts from canine faeces. This was due to the development of schizonts in the endothelial cells of the blood vessels of all internal organs. The cattle dog species was recorded to induce abortion. A case of spontaneous fatal sarcocystosis in naturally infected calf was reported in U.S.A. Outbreaks of naturally occurring sarcocystosis among

cattle have been described from the United States, England and Norway. Research studies are going on in our Department on Sarcocystis of cattle and water buffaloe. Preliminary observations showed that the infection rate in cattle was 96% and 82% among adults and calves respectively. The cattle dog species constitutes the majority of sarcocysts infection. S. arcocystis fusiformis was the only species recorded from water buffaloes until now with 100% infection rate. Studies on the pathogenicity of Sarcocystis species of cattle and water buffaloes in Egypt are currently under study.