

## Abstract

Sarcocystiosis caused by different *Sarcocystis* species is a protozoal infection with worldwide distribution in man and many species of animals. Bovine sarcocystosis is known to cause considerable morbidity and mortality in cattle. There is high infection rate of sarcocyst in cattle in Iran. The aim of this study was to survey prevalence of sarcocystis cyst in slaughtered cattle of Karaj, Iran. During April 2015 to September 2015, from cattle which is slaughtered for human consumption in Zabol abattoir, Zabol, Iran, 50 cattle were investigated for the presence of macroscopic and microscopic Sarcocystis cysts in muscular tissues. Oesophagus, heart, diaphragm, lingual and masticatory muscles were examined for *Sarcocystis* spp. infection. For light microscopy, tissue samples were taken from the heart, esophageal, diaphragmatic, lingual and masticatory muscles and then fixed in 10% neutral buffered formalin. They were processed and embedded in paraffin. Sections of 5- $\mu$ m thickness were cut and stained with Hematoxylin and Eosin. In light microscopy, 50 cattle (100%) had thin-walled cysts of *S. cruzi*, while 33 out of them (66%) had thick-walled sarcocysts and one cattle had macroscopic sarcocysts. The positive rate of thin walled cyst was 9.3% for esophagus, 58.8% for heart, 7.8% for diaphragm, lingual 10.2% and masticatory muscle 13.9%. The positive rate of thick walled cyst was 32.9% for esophagus, 22.9% for heart, 0% for diaphragm, 28.6% for lingual and 15.8% for masticatory muscles which could represent either *S. hominis* or *S. hirsuta*. In this survey, the most infected tissue was heart and the less was diaphragm. Thin walled cysts (*S. cruzi*) mostly found in heart and diaphragm shows the less. However, thick-walled cyst (*S. hirsute* and *S. hominis*) mostly were detected in esophagus, diaphragm muscle show no thick-walled cysts.

**Keywords:** cattle, *Sarcocystis* species, thin-walled cysts and thick walled cyst



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