



LESIONS OF HUMANS WITH SARCOSPORIDIA

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Abstract

The article provides information on the degree of infection of the muscles of some internal organs of people living in different ecological conditions of the Republic of Uzbekistan with sarcosporidia.

Keywords: sarcosporidium, sarcosporidiosis, squid, carnivorous and carnivorous animals, carnivores, macroscopic and microscopic, observations, micropreparation, macrocyst and microcyst.

Аннотация

Мақолада Ўзбекистон Республикасининг турли хил экологик шароитларида яшаган инсонларнинг айрим ички аъзолари мускулларининг саркоспоридийлар билан зарарланиш даражалари ҳақида маълумот келтирилган.

Таянч сўз ва иборалар: саркоспоридий, саркоспоридиоз, текинхўр, ўтхўр ва гўштхўр ҳайвонлар, ҳамахўр, макроскопик ва микроскопик, кузатишлар, микропрепарат, макроцист ва микроцист.

Аннотация

В статье приводятся результаты исследования заражённости некоторых внутренних органов человека, проживающих в различных экологических условиях Республики Узбекистан саркоспоридиями.





Ключевые слова и термины: Саркоспоридий, саркоспоридиоз, паразит, травоядные, плотоядные и всеядные животные, заражённость, макроцист, микроцист, цистозоит, интенсивность.

Introduction

Sarcosporidians live in the heart, esophagus, and skeletal muscle fibers of mammals, humans, birds, and other vertebrates, forming cysts of various shapes that resemble a white-gray sac that can be seen with the naked eye. For example, in the upper part of the esophagus of infected cattle, it occurs in the form of large rice grains. He also noted that such sacs are found in other internal organs of animals: tongue, abdominal diaphragm, heart, hip, leg and neck muscles. They vary in size. In particular, cysts can be 5–20 x 0, 5–6.5 mm long, depending on which organs of the animal are found. That is why they are called macrocysts.

The heart muscle of cattle living in different ecological conditions of Uzbekistan is oval and round in shape, 1.5-6.5 mm long and 1.5-5.5 mm wide, and in the esophagus is white, oval and round. macrocysts with a length of 1.5-7.5 mm and a width of 1.4-6.0 mm were found in Figs. (Gadoev, 1978). There are also blood-sized lesions (15–200 μm) of cysts that can be seen under a microscope. Such cysts are found in the muscles of animals, mainly in the heart muscle. Microcrystals of sarcosporidia in oval and ductile forms were also found in micropreparations prepared from the internal organs of cattle. They are located between the heart muscle fibers of these animals and are 0.1-1.5 mm long and 0.025-0.0375 mm wide.

The thickness of the walls of the tsista differs both in species intra-and interspecies interspecies. The inside of the cistas is separated into cisterns with thin membranes. The inner cavity of the adult cyst consists of peripheral and central sections of the larynx. The thickness of the walls of the tsista is different both in the round and in the round. Inside the cysts are separated into cages with thin membranes. The inner cavity of the adult tsista will consist of peripheral and central sections. The peripheral section is filled with "metrocytes", while the central section is filled with banana-shaped endozites. Morphologically, endozoites resemble the inheritance of coccides. This position is the final stage of development in the intermediate cell of the free-loader (Scholtiyseek et.al; 1974). and Metrocytes are considered to be an incomplete form of free fall.

When viewed under light microscopy, endozoites (hereinafter referred to as cystazoites) appear bean-shaped, oval in shape. Often in the shape of a banana, one side is sharpened and slightly turned inwards. Metrocytes and cystozoites are 10–16 mkm long and 2.0–5.6 mkm wide.



The body of cystozoites consists of 3 sections: anterior, central and posterior. The anterior part of the body is pink or blue, the central part is blue, and the posterior part is the nucleus. The core will be painted in dark ink.

The life cycle of sarcosporidia is free: in the host system it takes place in the intermediate and main host. In 1972, German scientists Heydorn and Rammel determined experimentally that predators (cattle, sheep, pigs, etc.) as intermediate hosts were predators, while carnivores were dogs and cats. In particular, the researchers found that sheep, cattle, and pigs had been exposed to sarcosporidia-infected meat to cats, dogs, and humans for some time.

then the symptoms of sarcosporidiosis were observed in these organisms. This experiment proved that sarcosporids pass through two cells in their life cycle. The period of sexual reproduction of sarcosporidia takes place in the body of the main host (in cats, dogs and humans), and the period of asexual reproduction takes place in the body of intermediate hosts - sheep, cattle and pigs.

In the main cell organism is the process of gametogenesis, in which oocytes are formed (the sexual stage of development). In the skeletal muscle tissue of the intermediate host organism, the stage of asexual reproduction is completed, with the formation of macro- and microcysts.

The formation of cysts in the skeletal muscles of the intermediate host is formed after 90-100 days from the day of eating them mixed with spores and spores, within the cysts, merozoites are formed. The intermediate host of sarcosporidia can be infected with sarcosporidia belonging to several species at the same time, and each of these species is characterized by being the primary host.

In the small intestine of the main host, the process of gametogonization takes place, and macro and micro gametes are formed. In this process, the microgamete enters the macrogamete and forms a zygote. The fertilized blood macrogamete becomes a thin-walled oocyst. Each oocyst develops 4 spores. This stage of sarcosporidia is called invasive.

The cycle is repeated when the ruptured blood and the ruptured sarcosporidia, which have 4 sporocysts, pass into the body of the intermediate host.

Human beings are both primary and intermediate hosts for some representatives of sarcosporidia because they are organisms. This situation was reported by A.O. The results of experiments conducted by Heydorn (1976) and his students also confirm this.

The occurrence of sarcosporidiosis in humans was first reported in Russia in 1863-1865 by K.E. Lindeman, who first considered this free-ranging animal to be a Gregarian. Later, A.M. Rivalt (1978) identified this tekunur as one of the sarcosporidia





and named it *Sarcocystis Lindemani*. To date, according to scientific data, sarcosporidiosis has been found in 15 people worldwide. Sarcosporidia is commonly found in the heart, lips, ulcers around the nipples, trachea, and esophagus. The disease has also been found in the buttocks of a man who died of tuberculosis.

Sarcocystis sp. By biopsy at the human trachea in Malaysia. should also be noted (Kutty et al. 1975). According to the literature, larvae pass through well-cooked meat. Sarcosporidiosis can lead to myocardial infarction in the heart and esophagus in the esophagus. This data is not particularly relevant for medics, since there is no evidence that medics have begun to study sarcoyricians even deeper.

Based on the above information, we participated in the opening of the bodies of 110 people living in different ecological conditions of the Republic of Uzbekistan, who were brought for forensic examination in Tashkent, where their hearts, esophagus, tongue, spleen, kidneys and from skeletal musculature in various locations: we prepared a micropreparation by scraping with a blade and fixing this micropreparation with methyl alcohol, staining it with Eosin-Azure dye for 20 minutes and examining it under a microscope.

The inspections were conducted in two different ways. Macroscopic (with the naked eye) and microscopic ie preparation of micropreparations from the internal organs and viewing them under a light microscope.

Observations by the macroscopic method did not yield results — that is, no macrocysts were seen. Microscopic examination revealed sarcosporidia in 10 out of 110 human bodies, which is 90%. There were two stages of development of sarcosporidia (microcyst, cystozoite). The intensity of damage to microcysts is from three to four, the color is white, the shape is mostly oval, round, 1.2-1.34 mkm in length and 0.016-0.130 mk in width. The intensity of damage of cystozoites was 8-10, size: length 11.0-13.0 mkm, width 2.5-4.5 mk.

Of the internal organs examined, sarcosporidia were found mainly in the heart, esophagus, and skeletal muscle. No lesions were detected in the remaining tongue, kidneys, spleen, and liver. Sarcosporidia found in the human heart, esophagus, and skeletal muscle were found in the microcyst and cystozoite stages.

Based on this information, we have developed measures to prevent sarcosporidiosis. It is based mainly on the results of experiments on the feeding of carnivorous animals: the meat is consumed after boiling at least 1-1.5 coats. Therefore, strict adherence to existing prophylactic measures against sarcosporidiosis is required.





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