properties. Further investigation is necessary to identify those bioactive compounds, which will be a platform for further pharmacological studies and clinical applications.

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SARCOCYSTOSIS OF CATTLE IN UKRAINE

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Introduction. In recent years, parasitic diseases have a tendency for spreading and cause significant economic losses to the national economy. Such a disease as sarcocystosis is dangerous to human health, so the problem of the spread of this infestation also has a social nature [2]. Unfortunately, proper attention is not always given to controlling of parasitic infestations, primarily due to the fact that the disease is often asymptomatic. Nowadays more than 150 species of sarcocystis, which affect domestic, wild animals, reptiles, birds, marine mammals and humans, are known. In productive animals (intermediate hosts) the parasites are localized in different muscles, forming cysts under the sarcolemma of muscle fibers. The intensity of sarcocystis infestation of different muscles in cattle is not the same [1]. Based on the results of studies carried out by Fukuyo M. et al. among beef cattle in Mongolia in 1998-1999, the heart muscle had the highest intensity of sarcocystis infestation compared to other muscles [3]. W. Hirschman (1974) reported that the sarcocystis cysts were often found in the muscular tissue of the esophagus, and M. Saito, T. Nakajima, A. Wa-

tanabe et al. (1986) argued that sarcocystis often formed cysts in the myocardium, less - in the muscles of the diaphragm, even less - in the tongue [4, 5].

Materials and methods of the research. The studies were conducted in the scientific research laboratory of the Department of Parasitology and Tropical Veterinary Medicine of the National University of Life and Environmental Sciences of Ukraine during 2014-2016 years. Samples of cardiac muscle, crura diaphragmae and m. longissimus dorsi of cattle were used as a material of study. The research was conducted by the compressor method using the technique described by A.G. Kakurina (1970). For this purpose out of each muscle 4 oat-seed sized cuts were made, then stained with a solution consisting of equal parts of glacial acetic acid and 1% aqueous methylene blue solution, crushed between the glass plates of compressorium and examined under a low microscope magnification. On a light blue background of muscular tissue sarcocystis were painted in dark blue color.

The results of the research. In total 636 samples of muscle from 53 bovine carcasses were investigated. The samples of muscular tissue were purchased in trading networks and markets of Volyn, Kyiv, Sumy and Khmelnytsky regions of Ukraine. The prevalence of sarcocystis infestation of cattle on the territory of the studied regions was 100%. However, the sarcocystis infestation of individual muscles was different. The results of investigation are shown in the table 1.

Thus, the extensity of sarcocystis infestation of cardiac muscle was the highest - 72%, and the average intensity of infestation was also the highest - 22 sarcocyst in 4 sections. Less affected with sarcocystis was m. longissimus dorsi - the average intensity of infestation 13 sarcocystis in 4 sections with the extensity of infestation 66%. The least intensity of sarcocystis infestation was observed in crura diaphragmae - the average intensity of infestation 9 sarcocyst in 4 sections, the extensity of infestation - 62%. It should be noted that the highest intensity of sarcocystic infestation was observed under the highest extensity of invasion.

Table 1 - Extensity and intensity of sarcocystis infestation of individual muscles of cattle

	Extensity of infestation, %	Average intensity of infestation, Sarcocystis in 4 sections
Cardiac muscle	72%	22
Crura diaphragmae	62%	9
M. Longissimus dorsi	66%	13
Total of examined carcasses	53	

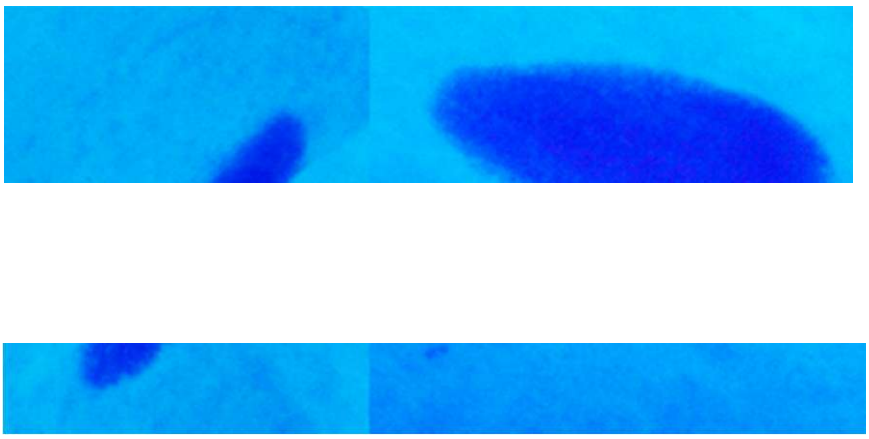

Figure 1 - Sarcocystis in cardiac muscle of cattle (enl. x400)

Furthermore, the found sarcocystis had different shapes and sizes depending on their localization. So, in the cardiac muscle of cattle 2 forms of sarcocystis have been identified: cigar-shaped and oval-elongated (Figure 1).

The dimensions of the first (cigar-shaped) constituted 3111 ±81 *687±68 |jm, of the second - 2404±183*868±61 |Jm (n = 1 б). Sarcocystis, detected in the muscle fibers of m. longissimus dorsi and crura diaphragmae, had more elongated shape.

Conclusion. Thus, our investigation had shown that sarcocystosis is a widespread disease among cattle in the studied regions of Ukraine, the prevalence of infestation made up 100%. The highest extensity and average intensity of sarcocystis infestation were observed in cardiac muscle - 72% and 22 sarcocystis in 4 sections respectively.

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