TRICHINOSIS: THE EPIDEMIC SITUATION IN UKRAINE

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Introduction. Trichinosis is one of the most dangerous helminthic diseases of humans and animals. It is established that infection occurs when eating meat or meat products containing invasive larvae of trichinella. In recent years, more than 10 million people have been diagnosed with the disease. Parasites are adapted to a very wide range of hosts: a natural invasion is established in 150 mammalian species from 12 orders. In recent years, it has been found that trichinella, which does not form a capsule in the host's muscle tissue, can infect 13 species of birds and reptiles.
Conducting molecular-genetic and biochemical studies of parasites made it possible to establish that the genus Trichinella is a complex of morphologically closely related species. To date, 5 species of Trichinella have been identified which form the capsule in the muscle tissue of the host (T. spiralis, T. nativa, T. nelsoni, T. britovi, T. murrelli) and 3 capsuless species (T. pseudospiralis, T. papuae, T. zimbabwensis) .
Three genotypes (Trichinella T6, Trichinella T8, Trichinella T9) that do not have a clear taxonomic status are also described. All described species and genotypes of Trichinella are dangerous for humans. It is established that infection with "natural" species of parasites often has a lethal outcome. Thus, the study of distribution, the main hosts and the identification of Trichinella in the territory of Ukraine is an urgent task for today.

Aim. To study the spread of trichinosis in Ukraine and to analyze the current epidemic situation in our country.

Materials and methods. Study materials of the Central Veterinary Laboratory of Ukraine and the State Sanitary and Epidemiological Service of Ukraine, use of data from the State Statistics Committee of Ukraine; review of the history of studying trichinosis.

Results. In Ukraine, the study of the spread of trichinosis among the synanthropic animals started at the end of the XIX century. Currently, parasites are found in 7 species of animals: a domestic pig, a domestic dog, a domestic cat, a gray rat, a house mouse, a European mink and nutria. To date, trichinosis of domestic pigs is registered in all regions of Ukraine. The greatest number of infected animals is found in Mykolaiv and Dnipropetrovsk regions. Study of wild animals for invasion with Trichinella in Ukraine for a long time was not conducted, as the main masters of parasites were confidently considered only domestic pigs and rats. The first studies of wild carnivores (bear, wolf, fox) date from the end of the last century (1980-1989).

Throughout 1970-2005, Trichinella are found in such wild animals as wild boar, bear, wolf, raccoon dog, fox, European wild cat and forest cat, ferret, badger, field and yellow-necked mice, common vole, and also common hedgehog.

Natural foci of Trichinella infestation are recorded in the Transcarpathian, Lviv, Rivne, Zhitomir, Chernigov, Poltava and Dnepropetrovsk regions, as well as on the Crimean peninsula. The most persistent focus of trichinosis was recorded in the Transcarpathian region, where almost 70% of the animals studied were found to be infected with Trichinella. Trichinella larvae are isolated from the most important species of hunting and commercial animals, which are often the basis of the diet of the population of the western regions of Ukraine. Thus, the role of wild animals as a source of human trichinosis is exceptionally high.

Molecular genetic studies of trichinella isolated from domestic pigs made it possible to establish that T. spiralis circulates in the synanthropic foci of trichinosis in Ukraine. This species of Trichinella is most often recorded in domestic and synanthropic animals, not associated with natural foci of invasion, as well as humans.

Parasites from wild ungulates and predatory mammals have been identified as T. britovi and T. nativa. Cases of mixed invasion of T. spiralis-T. Britovi and T. britovi-T. nativa not identified.

Thus, at the present stage it is established that on the territory of Ukraine there are relatively both natural and synanthropic foci of trichinosis. The main reservoir of invasion in natural conditions are predatory mammals - the wolf and the fox, and in the synanthropic - the domestic pig and the gray rat. A man has an enormous influence on the formation and support of the long existence of foci of invasion in different conditions: hunting and fishing, violation of conditions for keeping domestic pigs, increasing poaching, increasing the risk of trichinosis infection through meat of wild animals that has not undergone the corresponding veterinary and sanitary expertise. For example, the extent of invasion of wild boars is more than 3%. Therefore, if according to the State Statistics Committee of Ukraine the number of wild boars in 2002 was about 19000 individuals, then infected trichinosis may be more than 600.

Conclusions. The available data point to the importance and necessity of antitrichinella measures aimed at preventing infection of people whose main tasks will be the rupture of trophic chains between wild and domestic, as well as wild and synanthropic animals. It is also important to educate the population and hunters about the dangers and ways of spreading trichinosis.