

THE EFFECT ON THE MORPHO-PHYSIOLOGICAL CHARACTERISTICS OF THE BODY OF CARP FISH INFECTED WITH CESTODOSES

(Based on literature analysis)

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Summary: *This article presents the main cestodoses of carpian fish, their literature on the study of their influence on the morphological and physiological properties of the fish organism.*

Key words: *helminthiasis, ligulosis, L.intestinalis, hyperemia, atrophy, plerocercoid, hemoglobin.*

Introduction. In order to satisfy the demand of the population of our mamalakat for quality and environmentally friendly food, special attention is paid to the development of livestock cattle, sheep and goat farming, as well as poultry, fishing and beekeeping, and at the same time, special attention is paid to the creation of the scientific basis for the development of the industry. [10].

In the decisions of the president of the Republic of Uzbekistan dated May 1, 2017 PQ-2939 "on measures to improve the management of the Fishing Network", PQ-4005 dated November 6, 2018 "on additional measures to further the development of the fishing sector", many important practical measures are carried out in our country on the implementation of important tasks.

The purpose of the study. Analysis of the data of scientific literature of our republic and scientists on cestodoses found in carp fish.

Literature analysis. In order to study the problem, we analyzed the scientific literature dedicated to fish cestodoses based on the topic of research.

Diseases found in fish in water bodies are often caused by the strong effects of anthropogenic factors on natural ecosystems. Such diseases are even more pronounced, especially in cases where unfavorable conditions are created for artificial fish production facilities. One of the characteristic main features of fish diseases is that the results of work, regardless of the type of fish farms, are largely determined by the epizootic state of the fish gang. For this reason, it becomes clear that protecting fish from diseases is a very urgent problem [1].

An important place among fish diseases is occupied by invasive diseases, the causative agent of various parasitic diseases. Causative agents of 5 groups of diseases are called, consisting of protozoa, helminths, crustaceans, as well as molluscan larvae and diseases found in the intestinal-lining of fish.

Parasites, disease sources, transmission mechanisms, and developmental biology of pathogens determine the ways in which invasive diseases can spread in reservoirs. Invasion diseases among fish with the main routes in their flock tarqaladi. To through direct contact, the transmission of protozoa diseases occurs mainly at the bottom of reservoirs [2].

Fish parasites are considered a reliable indicator that determines the ecological status of water bodies. Under conditions of strong man-made pressure, the ecological stability of the system is weakened, the immunity of fish decreases, their susceptibility to infectious and invasive diseases also increases the level of damage with parasites [4].

The parasitofauna of fish in water bodies is a very accurate description of the ecosystem due to the high degree of dependence of this body of water and its population on the characteristics of the regime. The species composition of parasites is determined by the main parameters of their population and a complex of correlations, and at the same time, the variety of the main species in them, the number of primary and intermediate hosts [3;13].

Although mortality from parasitism by tapeworm helminths (Cestodes) in the fish organism is relatively low, serious economic damage to fish farms is caused by the growth and development of infected fish as well as the decrease in the effectiveness of the consumed feed product, deterioration of breeding characteristics [6].

The characteristics of blood analysis, immunological examinations, cell cultures in the early diagnosis of ligulosis have been studied by a number of researchers [7].

Diagnosis of ligulosis is based on clinical signs as well as the separation of Fish and the finding of plerocercoids in the abdomen. The veterinary and sanitary assessment of infected fish is as follows: it is allowed to eat in the absence of strong pathological changes. Fish that are highly invasive with ligulosis are considered unsuitable for consumption [8].

The intensity of expansion of the fish's abdominal cavity is due to changes in its morphology to the overall biomass of the parasite. The size of the fish depends on the weight of the parasite in the plerocercoid stage [5].

From the plerocercoids (tapeworms), the ligule and digram are up to 120 cm long, with a single elongated saddle on the ventral side of the body (strobila), which is not externally divided into joints, while the digram claims to have two ligaments. It has been cited that the parasite has two botrils located at the anterior rounded tip [9].

The disease is reported everywhere in water bodies, less often in rivers and lakes. Mainly carp-like fish (lesh, common red autumn, snot, silver heel, etc.) get sick.

Sometimes L.the larvae of the intestinalis, sestoda, are found in the body cavity of carp-like fish. The outbreak of ligulosis occurs in spring and summer. Along with the mechanical effect on the internal organs, the internal secretion products of helminths lead to poisoning of the organism of the intermediate boss. Hematological indicators of blood change. The amount of hemoglobin decreases by 20-25% from the norm, the number of polymorphonuclear and neutrophil cells increases by 2-3 times, and the ECHT accelerates by 1.5-2 times [11;12].

Tapeworm helminths including ligulids located in the body cavity of the fish, clamp the internal organs and meet atrophy. Fish with ligulosis (or digrammosis) are often infertile and lag behind growth and development-that is, their weight is 20-25% lower than those with undamaged fish [14].

As a result of the consumption of infected fish, sexually mature plerocercoid triggers begin to release eggs in the intestines of fishing birds within 3-5 days. It has been suggested that birds transport parasitic pathogens over long distances as well as lakes, reservoirs, fish farms in the watersheds and in the opposite direction, as well as private fish farms in the watersheds [15;20;21].

According to their research, the authors observed changes in the parasitic fauna of some fish species under the influence of high pressure in the South Aral Sea region, commenting on the control of fish parasitofauna under human influence, fish parasite species, pathogenic species with a constant high degree of damage, fish disease triggers and environmental factors [16].

In the Fergana Valley, 11 new species have been recorded in khudud as a result of an inventory of fish parasites. The author noted parasites belonging to 115 species in the fish of the

Fergana Valley water bodies (parasitic simplices-32 species, monogeneans - 47, flatworms - 17, roundworms - 8, thornbills - 3, leeches – 2 and crustaceans-6 [17].

Khorezm Basin oxen analyzed fish parasites and ways to combat them, providing scientific data on fish diseases, dominant parasite species, intensity and extensibility of invasion, methods of treating the disease [18]

When the parasitic fauna of the mirzachul channel fish was examined, 58 species identified parasites in 152 specimens of fish. 18 species of parasites have been identified in the red Stingray, 12 species in the silver stump Stingray, and 5 species in the Sazan, 7 species in the Turkestan whisker. Commented on the parasitic diseases of the fish of the water bodies of the Syrdarya region, fish species, helminth species [19;21].

Conclusion. According to the analyzed literature, fish sestooses have a wide distribution in all water bodies, the influence of which on the morphological, physiological and biochemical characteristics of the fish organism has not been sufficiently studied.

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