Fish silver carp, and rejoin heat pathology review Amur fish parasite skin hookworm (Lierne A.) in Ahvaz

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Abstract

Introduction: A Lierne, a Sypryns has a problem in growth carp was known for hundreds of years and are commonly called hookworm. It has a very broad area that host many members of fish has invaded freshwater eat. Surangle penetrate the fish's skin, causing a long metamorphose is a parasitic organism. The purpose of this study was to investigate the effect of hookworm on histo-pathological changes of silver carp fish and the fish is Amor. Methods: In this study on 30 samples of fish (silver carp Affairs) took 30 fish from three farms and randomly (10 examples from every field) fish weighing over 150 grams it is using inkjet net (vetch) were caught. The fish were caught in summer and the city Branch. Skin of infected fish isolated in 10% formalin buffered to a Lierne saved. To prepare slides of tissue samples for histopathology department of the Central Hospital was sent to Shiraz. The sections of providing pathology of parasitic junction Lierne A Fish specimens, the sections were studied. The results indicate that the inflammatory cell infiltration influence mononuclear cells, the formation of new fibroblasts, increased melanin pigment, muscle necrosis, congestion, de- vein, was bleeding.

INTRODUCTION

Increase in intensive fish carp in the world, increasing parasite threatening the health of fish growth and life. Parasitic illness characterized by an early complication faced with external parasites seen the red skin lesions that spell "red sore" they say. The waste more in heat seasons of years and at least 10 species of fish have been seen. Red sore actual clinical conditions clearly indicate that by Mr. hezen colleagues as dermatopathy that initial infection with the bacterium Aero monas hydrophlic have been defined and further infection, secondary invasion of radioactivity colonies epistyles (heteropolaire) takes place (2). In the seventies severe outbreak of red lesions cause massive casualties breeding farm in America. The most common parasitic diseases of fish, white spot disease, a sea of white spot disease, skin or gills flattened worms, hookworm (Lierne w) hole looks sick (hegazanemia), psychonodiom (velvet disease or gold dust) are considered.

Species Lierne The most dangerous part of the world is the expansion of Iranian freshwater farmed fish parasites in fish farming has become more dense felt the importance of this parasite. These parasites are certain tropical and temperate and over 40 species have been identified. Much information is available about the prevalence of these diseases, but there is enough history about the effects of this parasite pathology. Appears to require cell response and little bag, as well as changes in the skin at the cellular responses to these parasites to be evaluated. Many examples of research done on this parasite are present. For example, the Sower and colleagues from common carp and silver carp Lierne A Syprynaseh they have reported. This parasite has been reported from Lake spiritual plain. Alishahi too heavy infestation of parasites from farms Iran has reported.

Amur fish or carp, grass-fed, is most distributed in watershed. Amur fish Caspian white fish is very similar to white so that it is called culture. This fish carp fish Shaklan orders, families and sub- families Cyprinidae carp

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is located. Part of the fish is carp Chinese fish in culture systems combined with common carp, silver carp (silver carp) and big head carp, grow. These fish in their original homelands in China, torrential rivers contaminated with water flowers bed and covered with gravel to spawn mass. Spawning takes place at a temperature of 21-23 degrees Celsius. The number of eggs is thousands with 500 -200 mm in diameter are 1/2-0/5.

Silver carp (fitofog G) of carp fish. Its distribution is in the Caspian Basin and elsewhere in Iran. These fish belong to the suborder carp Shaklan, family, and subfamily carpis carpian . Silver carp has an economic value in the row with the value of the fish is farmed. Breeding these fish is quite economical and affordable.

Lierne parasites can be found in both freshwater and marine. Due to the direct cycle of these parasites, it is an important pathogen in closed environments (ponds and aquariums) has. Free Ways to seawater pools, or may easily be infected with this parasite. ’ve Found the parasite in the phylum Coupe (copepods) includes: Aragasylus, Lierne A, and Kalygus and Branchurya : argalus and are isopoda (8).

Wounds caused by this parasite are usually viral and bacterial and fungal infections and in some cases septicemia or septicemia are. In some cases a wound created by Lierne by other parasites like Castile beaten in this case, the probability is very high fish mortality.

The parasites in the gills are attached to the front of a cement gland. According to the above and the fish feed, fish, silver carp, and rejoin the aim of the present study heat pathologically Amur fish parasite hookworm (Lierne a) of the skin.

Methods:
Sampling was conducted in aquaculture farms near the city Branch River Gorge branches are located. Samples from three farms located in four cardinal directions into the pools towards the most northern, southern, eastern and western most important fields have been carried out yet.

30 fish from three farms and randomly (from every field 10 samples) over 150 grams is the weight of the fish using nets kissing (vetch) were caught.

A total of 30 specimens from three farms and randomly (from a field of 10 samples) from the site of wounds and injuries caused by parasites of fish, silver carp and Amur Lierne cm size x0.5x0.50.5 were collected. Tissue samples were prepared and placed in 10% formalin for fixation. After preparation of the samples for histopathological sections were sent to the Central Hospital in Shiraz. The slides accompanying Form pathologist they are placed for final diagnosis.

Results:
Sections of the pathology of parasitic junction Lierne A Fish specimens, the sections were examined and the following results were obtained. Histopathological examinations showed inflammatory responses in the region are the dermis (Figure 1).

Fig. 1: infiltration cell and macrophage infiltration of inflammatory cells (marked with felz) can be seen in other inflammatory cells lay.
Fig. 2: the formation of new fibroblasts, the cells becomes swollen with pale nuclei (bottom arrow).

In the present study, the levels of melanin tissues were found around blood vessels (Figure 3).

Fig. 3: an increase in melanin pigment in the blood vessels.

The disintegration of muscle necrosis of the muscle cells is also observed (Fig. 4).

Fig. 4: muscle necrosis

Hyperemia of the dermal capillaries in the affected area while improving the other findings of the lesion (Figure 5).
Discussion and conclusions:

Edges connecting the isolated dermis, which represents one of the healing process Carp mildly begins six days after the injury and after 16 days the connection will be completed by fibrous tissue. It was also shown that vitamin C is a catalyst for the formation of collagen in wound healing. Previously it was stated that the wound healing response correlated with the level of ascorbate in the diet is fish. Although the study by Noble M., this hypothesis was not proven.

In another study on the wound healing process in common carp, infiltration of inflammatory cells and macrophages present in the first two hours after the injury were recorded. In a study conducted by the train Bull and colleagues also rejects the foot of the inflammatory response in many sections of the dorsal fin rot pathology of Atlantic salmon Parr has been observed. In the early stages, the cellular response to the presence of necrosis has been reported frequently.

Other findings at the site of injury are increased melanin. Presence of melanin as an important bulwark in fish reported. In addition to the role of melanin in fish hiding in the past stated that the pigment melanin and the ability to produce hydrogen peroxide (H2O2) may play a role in defense against most organisms. In addition, the mechanism of melanin UV light to kill bacteria and prevent UV penetration of the epidermis, the dermis has improved recently been restored into a new area play an important role. The presence of melanin pigment melanin in the area damaged eight hours following the development of new epidermis new base layer and fibrous tissue within eight days after the injury has been observed. After the progress of wound healing, wound healing and expansion of melanin in the region increases. The key findings from the survey corresponded with the pathologic findings that increased melanin in some cases, especially around the capillaries were observed. If the research conducted in the past, it has insisted on it. The next will be Slides prepared in this study also clearly seen in inflammatory reaction and congestion.

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