



FISH DISEASES – CAUSES, SYMPTOMS AND TREATMENTS

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Abstract

Like other animals, fish can as well suffer from various diseases. Fish diseases influence the endurance and growth rates of fish under culture. Known that drug treatments are pricey, fish diseases consistently lead to lower harvest and higher cost. All fish bear parasites and pathogens. Disease is a crucial agent which affects fish mortality, particularly when fish are young. Pathogens causing fish diseases consist of viral infections, fungal infections, bacterial infections, water mould infection, protozoan infections, etc. Fish are also exposed from diverse environmental pollutants, containing drugs and chemicals. The most common fish diseases, particularly in freshwater aquaria, including gill disease, dropsy, columnaris, ick (ich), tail and fin-rot, fungal infections, pop-eye, white spot disease, swim bladder disease, cloudy eye, lice and nematode worms infestation, constipation, chilodonella, anorexia, ergasilus, henneguya, glugea, hexamita, hole-in-the-head disease, leeches in aquaria, injuries, lymphocystis, marine velvet, and neon-tetra disease, etc. Antibiotics are commonly used to control fish diseases which were caused by bacteria, but there is a rising risk of developing antibiotic resistant strains of bacteria. To lessen certain losses, it is vital to take safety measures to prevent the fish diseases and reduce the levels of pathogenic organisms in water bodies. It is also vital to prevent water quality from deteriorating and to toughen the natural resistance of the fish stock. Usual monitoring of fish health is an efficient way to identify causes of disease and appropriate treatments. As such, the sufficient care and treatment should be given to the infected fish.

Keywords: Diseases, Fish, microorganisms, pathogens, symptoms and treatment

Introduction

Fish plays a significant role in food security and in human nutrition to the population of the world. An investigation by the World Fish Center revealed that 1/6th population of the world derives its primary animal protein requirement from fish. Consumption of fish has doubled since 1973, especially in the Asian Countries including India (FAO, 2002). The Investigation In fish disease (Das et al., 1994; Ghosh et al, 1987; Das and Haidar, 1987; Kabata, 1985; Tripathi, 1952) carried out so far limited to Identification of diseases and Gopalkrishna, (1961) suggested some remedial measures. Since the high yielding technology such as semi-intensive culture method is of recent origin in the country, information of diseases occurring are rather meager which is evident from the paucity of literature on the subject in the country. Due to the Diseases and aberration, the quality of cultured fish become lesser which further affect their aesthetic demand, growth and the survival. Selling of these diseased and aberrated fishes is very tough and leads to the economical loss. In the present article we have reported the different diseases caused by the bacteria and fungi at local

markets of Ausa, Dist: Latur. During routine sampling if fishes were examined with the symptoms of any such disease or abnormalities were collected. From the study, the major diseases and aberrations were dropsy, deep body ulcers, fin rot, red boils, white patches, red sores etc. In the present study we have also suggested some curative measures and treatment possibilities in relation to the above said diseases and aberration. Further research is necessitating identifying the factors causing these diseases, aberrations and their medication to enable the development of aquaculture in a sustainable manner, particularly among small and medium-scale fish farmers. The present study will help to establish a link between water quality deterioration, environmental stressor, physiological performance of the fishes and parasitic infection. The present Investigation will also give an insight of the causes of disease and its relationship with the environmental stressor. This will facilitate to undertake necessary management measures for remedy. Information generated by this study will lessen to a great extent the gap in our knowledge on the subject. It is hoped that the knowledge accumulated will go

long way in addressing some of the problems of the farmers.

Fungal Diseases of Fishes:

Argulosis:

Symptoms: Argulosis caused due to Argulus (Fish louse). The fish rubs itself against an object, which are clamped fins. The fish louse is an about 5mm long flattened mite like crustaceans which attaches itself to the fish body. They irritate the host fish containing clamped fins, which turn into restless and may exhibit inflamed region where the lice found.

Treatment: If the fish is larger and light infestations, the lice can be easily picked off with a pair of forceps. In another instance can best be done with a 10min to 30min bath in 10mg/litre of potassium permanganate or the whole tank can be treated with 2mg/liter, but the drawback of this method is complicated which dyes the water.

Ichthyosporidium (Swinging Disease) :

It is called Swinging disease.

Symptoms: Slowness, external cysts and sores, hollow belly and loss of balance. Ichthyosporidium is a microbe (fungus), but it manifests itself internally. It primarily damage s the liver and kidneys, and spread everywhere else. The symptoms differ. The fish may become sluggish, loosely balanced, show hollow bellies and eventually show ecternal cysts or sores (Klinger R.E., and Floyd R.F., 1996).

Treatment:

1% solution of Phenoxethol and Chloromycetin added to food which may be effective. But both of these treatments, if not examined with caution, could pose a threat to your fish. It is best, if diagnosed soon adequately, to destroy the concerned fish before the spread of the disease.

Saprolegnia:

Symptoms: Cotton like growth on the skin can coat large areas of the fish, fish eggs become white. Fungal attacks constantly follow some other health problems such as parasitic attack, bacterial infection or injury. The symptoms are whitish or grayish growth on the skin and fins of the fish. Ultimately, if not treated, these growths will turn cottony looking. The fungus, if left untreated, will eventually consume away on the fish until it finally dies (Jhingran V.G., 1991).

Treatment: Use Phenoxethol (1%) solution in distilled water. Add 10ml per litre to this solution. If needed repeat these procedure after a few days, but only once more as three treatments could be dangerous inhabitants. If the symptoms are severe the fish can be immediately removed and futhergoing treated with a small amount of mercurochrome or providone iodine. Most

breeders will employ Methylene blue solution at a concentration of 3mg/lit to 5mg/lit as a preventive measure after the eggs are laid.

Bacterial Diseases of Fishes:

Generally bacterial diseases are characterized by red streaks/spots and swelling of the eye or abdomen.

Red pest:

Symptoms: Bloody streaks on body, fins and tail appear, so it is called red pest.

Treatment:

External treatments are frequently not effective as the disease is internal.

At the beginning of disease:

1. Treat the tank with a disinfectant and wash the tank as best as possible.
2. To disinfect, use a 0.2% solution of acriflavine or monacrin at the rate of 1ml/lit using. Both disinfectants will color the water, but the color disappears as the disinfectant dissipates.
3. Do not feed a lot while the fish in being treated.
4. If the fish do not seem to respond satisfactorily, discontinue the disinfecting process. Further add an antibiotic to the food. 1% of antibiotic may be gently mixed with flake food. If you persist the fish in hungry condition, they should readily eat the mixture prior to the antibiotic dissipates. Antibiotics typically available in 250mg capsules. If added to 25g of flake food, one capsule should be enough to treat dozens of fishes. A good antibiotic are Chloromycetin and tetracycline.

Mouth Fungus:

Symptoms:

White cottony patches around the mouth. It seems like a fungus which attack of the mouth, that's why it is called mouth fungus. It is in fact caused from the bacterium *Chondrococcus columnaris*. In the initiation period, a white or grey line shows around the lips and afterward short tufts appear from the mouth like fungus. This disease may be lethal owing to the production of toxins and the inability to eat. Hence, at an early stage, treatment is essential.

Treatment:

Penicillin at 10000 units/lit is a very effective treatment. Second dose should be given in two days or use Chloromycetin, 10mg/lit to 20mg/lit with a second dose in two days.

Dropsy:

Symptoms: Bloating of the body, protruding scales. Dropsy is arising due to bacterial infection of the kidneys, which causes renal failure or fluid accumulation. The fluids in the

body build up causing the fish to bloat up and the scales to protrude.

Treatment: An efficient treatment is to add up an antibiotic to the food. With flake food, carefully mix 1% of antibiotic. Antibiotics in 250mg capsules if added to 25g of flake food will be sufficient to treat dozens of fishes. A good antibiotic is Chloromycetin or use tetracycline.

Scale Protrusion:

Symptoms:

Protruding scales without body bloat. Bacterial infection of the scales and body causes scale protrusion. An successful treatment is to put in an antibiotic to the food. With flake food, use about 1% of antibiotic like Chloromycetin or tetracycline.

Tail Rot and Fin Rot:

Symptoms:

Disintegrating fins which can be lessened to stumps, exposed fin rays, reddened spots at the bottom of fins, skin ulcers having grey or red margins, blood on the sides of fins, cloudy eyes. The causal organism is the bacteria *Aeromonas*. If tank conditions aren't good an infection are often caused from an easy injury to the fins or tail. Fin and tail rot are the symptoms of Tuberculosis. Basically, the tail and fins become frayed or lose color.

Treatment: Treat the water or fish with antibiotics. A good antibiotic is Chloromycetin or tetracycline. Treatment of 1% Copper sulphate is also available.

Ulcer:

Symptoms: Loss of appetite and slow body movements. It is caused by bacteria *Haemophilus*.

Treatment:

Give dip treatment in 1% Copper sulphate for one minute for a period of 3 to 4 days. Antibiotics chloramphenicol and oxytetracycline may be helpful in acute infection.

Conclusion

Fish suffer from various diseases as they can bear several pathogens and parasites. Fish diseases are caused by bacteria, fungi, water moulds, protozoa, etc. Fish are also exposed from several environmental pollutants, including chemicals and drugs. Common fish diseases include columnaris, gill disease, dropsy, tail and fin-rot, fungal infections, white spot disease, pop-eye, cloudy eye, swim bladder disease, lice and nematode worms infestation, water quality induced diseases, anorexia, constipation, chilodonella, tuberculosis, ergasilus, leeches in aquaria, henneguya, marine velvet, hexamita, hole-in-the-head disease, glugea, injuries,

lymphocystis, and neon-tetra disease, etc. Antibiotics are usually used to control fish diseases which caused by bacteria.

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