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REVIEW ARTICLE

A Review of Abdominal Dehydration (Dropsy)

Mohammad Forouhar Vajargah*

Department of Fisheries, Faculty of Natural Resources, University of Guilan, Iran

ABSTRACT

Any factor that upsets the hemostatic balance of the existing body creates a condition called disease. Each group of pathogens has specific symptoms in fish, in other words, in general, the behavior and appearance of sick fish is different from healthy fish. Dropsy is one of the most ugly and difficult diseases of aquarium fish. Almost all types of aquarium fish can be infected with this disease, which unfortunately leads to the death of fish in 99% of cases. This disease is one of the easiest diseases to diagnose. But it can be said that it gives almost no response to treatment.

INTRODUCTION

Any factor that upsets the hemostatic balance of the existing body, creates a condition called disease [1-6]. Diseases of ornamental fish are divided into 3 categories based on their origin:

1. Diseases that are caused by pathogens.
2. Diseases that have their roots in biological conditions. Like poisoning, poor nutrition and, in general, unhealthy water conditions.
3. Diseases that have their roots in the fish itself, such as various types of organ defects.

Pathogens in fish are generally divided into four groups: viral agents, microbial (bacterial) agents, fungal and algal agents, and parasitic agents.

Each group of pathogens has specific symptoms in fish. In other words, in general, the behavior and appearance of sick fish are different from healthy fish. Therefore, it is easy to identify one or more sick fish in an aquarium between a numbers of fish. Pathogens, as they progress, cause changes in fish behavior that are often accompanied by some apparent symptoms. In many cases, the aquatic environment is responsible for causing disease in fish, but sometimes food also causes disease. Therefore, in order to prevent disease in fish, the environment and health of fish should be evaluated regularly, for example, if the fish comes to the surface and opens and closes the mouth and gill cover many times, or if the stimulus. The foreigner does not show much reaction or goes to the bottom of the water and remains sedentary there, etc. These can all be the reason for the disease in the fish or the changes that occur in the appearance of the body that should be in this regard. Have information so that we can identify the cause of the disease and its treatment method [7-9]. It is one of the ugliest and difficult diseases of aquarium fish, almost all types of aquarium fish can be infected with this disease. It is a bacterial disease that occurs due to poor water quality and in cases where the amount of water absorption in the body of fish is more Excretion This disease

*Corresponding author

Mohammad Forouhar Vajargah, Department of Fisheries, Faculty of Natural Resources, University of Guilan, Iran

Tel: +98-911-140-2833

E-mail: mohammad.forouhar@yahoo.com

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occurs in 99% of cases with the death of the fish involved. In addition to bacteria, this disease may also be caused by poor nutrition. If the cause is poor nutrition, the disease will not be contagious. This disease is one of the easiest diseases to diagnose, but it can be said that it gives almost no response to treatment. The main reasons for the difficulty of treatment of this disease are the lack of knowledge about the main cause of the disease and the internality of the disease. There is no definitive cure for this disease and only supportive treatment is done, which is only to prevent secondary diseases (not to cure the disease itself). It is best to quarantine the fish quickly so that it does not spread the disease to other fish. In cases where there is no hope of curing the disease, you can relieve the fish from suffering by using easy death or euthanasia. In this disease, a large amount of water accumulates in the abdominal cavity of the fish and the abdomen of the fish swells. In the advanced stages of the disease, even the eyes become watery and protrude from the orbit, and the anus also becomes severely infected and red, protruding scales and small subcutaneous hemorrhages have been observed in the fins [10].

DIAGNOSIS

Your fish is literally swollen. This is caused by swelling inside the tissues and organs, resulting in a huge structure of water in the body of the fish that the kidneys are naturally unable to excrete these fluids. Over time, as a result of swelling of the body, the scales become angular and form a pine cone. The best display of this is when you look at your fish from above.

What are the causes of this disease?

There are several factors involved in the development of ascites, the most obvious of which are bacteria. Poor water quality, poor diet can be the causes of this disease, which gradually causes damage to all fish. Bacteria of this type of disease are present in any water and attack the weak fish body and cause the fish body to swell. The main source of this disease is bacteria, but due to the presence of the virus with these bacteria, the disease may spread to other fish, it is recommended that the diseased fish be kept in quarantine. Kidney failure, poor diet, poor water quality are associated with other internal infections (eg liver). This disease is caused by internal swelling caused by fluid and pressure on the body and abdomen. Elderly fish are also prone to kidney failure and other bacterial, parasitic, and viral infections that increase the risk of Dropsy. Excessive feeding, excessive use of dry food and use of unhealthy live foods for fish can cause digestive problems and kidney failure and make your fish more susceptible to this disease. By keeping your aquarium clean, you can help eliminate the risk of developing the disease.

Symptoms

1. Swelling and swelling of the sides of the fish body

(due to the accumulation of water and fluids in the abdomen and internal tissues).

2. The protrusion and angulation of the scales of the fish's body and the creation of space between the scales (due to the pressure that internal fluids apply to the fish's body from the inside).
3. Scales and flakes begin to fall.
4. Wounds can be seen in the place of scales and scales.
5. Occasionally patients have a swollen and inflamed anus.
6. Protruding eyes from the orbit.
7. The ocular reactions of the fish are weakened.
8. Lack of appetite (unlike gastritis).
9. Pale body of fish.
10. Loose and unbalanced fish.
11. Drowsiness and lack of energy.
12. Lie on your sides.
13. The fish begins to sway below the surface of the water.
14. Stop the fish in a corner of the floor or surface of the aquarium and eventually the fish die.

Treatment

In general, the first step in treating sick fish is to separate them from other fish and quarantine them. What is even more unfortunate is that there are powerful factors in the treatment of this disease, and it is very difficult, if not impossible, to choose the appropriate treatment for this disease. You need to choose the best method and treat it as soon as you see the first sign of the disease in your fish. Keep the water level below normal to allow access to the surface for oxygen. Pumping air by a small air rock in the tank water helps to recover. The most common method of treatment is the use of ox tetracycline, which is cheaper than other drugs, in addition to being easily found in pharmacies. Treatment of this disease the following methods can be used: Raising the water temperature (between 30 to 34°C based on fish resistance) helps to cure this disease. This helps to remove water from the body. Asthma can be treated with broad-spectrum antibiotics if diagnosed early. Due to the wide range of agents of this disease, it is better to use a broad-spectrum antibiotic that covers both gram-positive and gram-negative bacteria. Use antibiotics according to the instructions. If the fish is still eating, you can soak the food in antibiotics for a faster effect. Many antibiotics reduce the amount of dissolved oxygen and are powerful, so siphon 25% of the water daily and use an air stone during treatment.

Tip: Never pour hospital tank water back into your main aquarium.

One of the recommended drugs is Kanacyn. Another drug could be Maracyn or Maracyn-Two. By combining these two drugs - which are safe - you can treat both gram-positive and gram-negative bacteria. Marasin treats gram-positive bacteria and Marasin treats two gram-negative bacteria. Antibiotics such as tetracycline, chloramphenicol, neomycin sulfate, penicillin and nalidixic acid are effective in treating ascites. Also, penicillin and uromycin antibiotics can be used as a bath. Chloramphenicol, octetetracycline tetracycline hydrochloride solution, furazolidone, sulfanamides such as sulfadiazole can also be used. Immersion of the potassium permanganate solution for 2 minutes is also effective. Early detection of this disease is critical to its successful treatment; In this case, parasitic treatment can be started in the aquarium. Perhaps the best and most important treatment is to remove the stressor for the fish and take care of it. It is recommended that you check the water quality, temperature, ammonia level, compatibility of the fish with each other and the possible presence of other diseases. Staph disease and many fish diseases, especially in freshwater aquarium fish, are caused by parasites. Which causes huge financial losses. One of the most common treatments for parasites is the use of formalin, which can be harmful to fish and the user. But one of the suggested ways to fight parasites is to use commercial products made with herbs to treat the disease. Aquatic parasites have been reported in countries such as China, Thailand and Japan. Allicin in garlic has been reported to have excellent antiparasitic activity [11].

Dosage of drugs used

Method of treatment: In a separate container for every 20 liters of water, dissolve the contents of one 250 mg oxytetracycline capsule and bathe the fish in it for 2-3 days. Adding 1 tablespoon of iodine-free salt per liter of quarantine water (depending on the tolerance of the fish) will help the fish in some special cases (salt bath). By doing this, you will help to absorb some body fluids and reduce the pressure on the fish body. Add 2 teaspoons of magnesium sulfate per 10 gallons of water (quarantine).

Note: When using medicine or salt for 10 to 15 minutes, the sick fish should be monitored to change 10 to 15% of the aquarium water in case of improper reactions.

The best way to fight this disease is to immerse the infected fish in a solution of 50 to 100 mg per liter of antibiotic made of uromycin or penicillin. If the disease is caused by poor nutrition, the best way to treat it is to change the fish diet. In any case, after observing the disease, the infected fish should be separated from other fish. Oromycin can also be dissolved in 250 to 500 mg in 5 liters of water and the fish can be kept in it until it reaches a suitable state.

For every 6.5 liters of water, dissolve one 250 mg capsule of chloramphenicol in water and then bathe the fish in this solution for 10 to 15 hours. This creates a false relationship between the body of the fish and the water, resulting in Water comes out of the fish's body. Here are some experimental methods: Soak the fish in a concentrated solution of water and salt (one tablespoon per liter) for 10 hours, which actually creates the same relationship that chloramphenicol has. Brings and improves fish. Dissolve one tablet of Marasin in 10 teaspoons of water, pour one teaspoon of it into the tank per gallon of water and add one tablespoon of the solution to the tank water daily. Dissolve one tablet of Marasin 2 in 10 teaspoons of water, for the first day add two teaspoons of the solution per gallon of water to the tank, and for the second to fifth days, one teaspoon of the solution.

Further details

Proper ventilation during treatment and when using medication is useful in treating the disease. Healthy water is always good for fish, especially for sick fish, and you may need to change some tank water frequently during treatment [12-15]. Always keep the water temperature of the fish between 76 and 82°F (25 to 28°C) to not only make the fish feel comfortable, but also to improve the security system of the fish body.

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