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Diseases of Cichlids Part 2

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Most common cichlid diseases | Part 2

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Having dealt with a number of diseases that are common among most species of cichlid in Part 1, I would now like to turn my attention to some diseases that are typical of certain species: gill flukes, HLLS or HITH, Malawi Bloat and discus or angelfish pest.

Discus are prone to gill fluke infections. Note the raised gill covers and the skinny body of this specimen.



Gill flukes (discus and angelfish)

There are many different kinds of gill flukes (monogenetic trematodes) that infect angelfish and discus. The most common of these is *Dactylogyrus* (size 0.3-0.5mm). They are most common among tank- or pond-raised fish, since this parasite is not so easy to control. The worms lay eggs that hatch after 7 to 21 days and the infection is not noticeable in the first stages of the disease. Usually, we see very few worms (only one or two on each gill arch), but, when fish are kept in poor and overcrowded conditions, this can develop into a serious infection within one week.

Clinical signs: In the first stages, fish show respiration problems, sometimes scraping against objects. Young fish rapidly exhibit secondary bacterial infections, become listless and die much sooner than older fish. Older fish display opened gill covers, lose color and appetite, and become emaciated and listless.

Treatment: Try to treat this worm infection during the first stages. If you wait too long, there will be too many eggs distributed in the pond or aquarium. Therefore, just one treatment will not be effective, but three treatments, with an interval of seven days between them, might be necessary to control this parasitic worm infection. The common treatment that has been used in the last decade is Praziquantel (at a dosage of 250mg/100 liter). Another recommended medication is Flubendazole (100-200mg/100 liter). Salt or formalin is, in most cases, not effective in the total control of the infection. Make sure that you also clean, siphon and medicate the filter, since worm eggs can be found there; siphon the bottom of the aquarium as well.



Gill flukes attached to gills (x 200).

HLLS (Head-and-Lateral-Line-Syndrome) or HITH (Hole-in-the-Head-Disease)

HLLS or HITH is a syndrome and cannot be called a disease because a specific pathogen or specific cause of this disorder cannot (as yet) be identified. This ailment is mostly associated with adult discus and *Uaru*, but also with *Astronotus*, *Heros*, *Mesonauta* and varieties of *Geophagus*. African cichlids can also show similar signs. (This syndrome is also known among certain marine fish, such as tangs and angels).

Clinical signs: It usually starts with a few small holes in the nose region, later on spreading to the head and the lateral line on the side of the body. We have to understand that the lateral line organ extends all the way from the side of the body, up to the nose and head region. In the beginning, the lateral line organ appears eroded and, later on, more 'excavated'.

When we perform a dissection, we usually find *Spironucleus* parasites (see Part 1) in the abdominal cavity. Some people have also found them in the lateral line organ, but during my 39 years of research, I've never found any. The causes of HLLS/HITH are still unclear and not scientifically studied. In my opinion, it is a syndrome caused by a combination of problems that occur separately or together, i.e. lack of good food, parasites (*Spironucleus*), bad digestion and poor resorption of minerals and vitamins, secondary bacterial infections, unidentified viral infection and other unknown factors.



Hole-in-the-Head in *Uaru fernandzyepezi*.

Treatment: A good diagnosis remains important in identifying certain pathogens. In our experience, just by treating the *Spironucleus* infection, plus the secondary bacterial infection and adapting the diet, many fish with this syndrome have been cured, as a result of having successfully treated a specific disease! Some fish might still have scars left after making a full recovery. Prevention is possible by providing good aquatic conditions and a good diet with phytobiotics like non-cooked herbs mixed in the fish food.

Malawi Bloat

This syndrome occurs in Malawi and Tanganyika cichlids.

Clinical signs: At first, affected fish become lethargic and exhibit rapid breathing and loss of appetite. Shortly after this, they develop a swollen (bloat) belly (different to dropsy/ascites, which results



In this *Tilapia buttikoferi*, the HLLS/HITH erosions can be seen spreading backwards from the head into the lateral line organ of the body.



This *Tilapia buttikoferi* has recovered from HLLS/HITH, but the scars remain.



A *Maylandia lanisticola* with a severe attack of Malawi Bloat. PHOTO: W. VAN DEN ELST

in raised scales). Sometimes, the anus protrudes and the fish die within a few days. After examining the fish, we usually find excessive fluid in the abdominal cavity and (sometimes) the parasite *Spironucleus* and/or secondary bacterial infections are also present. It is still unclear what the exact cause of this syndrome is. Much speculation has been circulating on the Internet, but, in our opinion, Malawi Bloat is a food-related problem.

Treatment: In most cases the problem can be solved, but only in those fish which do not show serious 'bloat' syndrome, by changing the diet to a more vegetable-based one and by avoiding animal proteins like beef or turkey heart, as well as by avoiding mosquito larvae and feed produced with a high fatty content or with too high a concentration of saturated fatty acids. We usually recommend additional algae (i.e. *Chlorella*) or easily digestible vegetable granulated food (with a good content of greens) as a form of treatment and prevention.

In some cases, we should not forget that pathogens can also be involved in this syndrome. We must therefore also treat the parasites, i.e. *Spironucleus*, and secondary bacterial infections.

Discus and angelfish pest (aids)

This syndrome, which is associated with high mortalities, is well-known among discus, angelfish and *Uaru*. The first reports of this problem reached us in 1986.

Clinical signs: Affected fish exhibit an excess of mucus on the skin and in the gills, respiratory difficulties and darkened coloration. Microscopic investigation sometimes reveals bacterial and/or parasitic infections and, in some cases, these infections are secondary. Occasionally, this syndrome appears, especially in newly imported fish, when low atmospheric pressure occurs in combination with high humidity.

In some cases, placing discus or angelfish from different origins in the same row of tanks in the fish house, or mixing them together in an aquarium, make them sick. A mix from Asian and European origins is especially prone to this pest. Fish originating from the same town or province have a lower risk of developing this ailment, or none at all.

This syndrome has not yet been scientifically studied, but the symptoms look as if it were an allergic reaction, i.e. slimy reaction of skin and gills that produce excessive mucus. Many discus or angelfish are raised in specific, enclosed systems without any contact with other 'foreign' counterparts and it seems that these fish have no resistance or immunity against health-affecting agents from other fish. After several days (or weeks) the fish that survive exhibit good health and develop resistance. Some blame the pest on a virus or a bacterium, but the situation is unclear, since each case seems to be different. We still have lots to learn....

Treatment: As prevention we recommend avoiding the mixing of species from different origin. Always try to buy from the same source!

1. Make a correct diagnosis. Use a microscope and you might find the causative pathogen;
2. Use fish food with immuno-stimulants (i.e. yeast extracts or beta-glucans) to strengthen the resistance of your fish;
3. When the symptoms first appear, carry out lots of water changes (each 24-48hrs) and, when necessary, add medicines against secondary infections;
4. Fish need time to recover, so have patience, because this can take several weeks.

General conclusions

A good microscopic examination is of the outmost importance in determining (in most cases) the real cause of the disease or syndrome.

The application of fish food with phytobiotics reduces the need to use medications; it is practical and important as a preventive measure, or during treatment. ■



The front specimen in this group of discus shows the beginnings of fish pest or 'aids'.

FURTHER READING

- G. Bassleer (2009), *The New Illustrated Guide to Fish Diseases*. Published by Bassleer Biofish
 G. Bassleer (2011), *The Practical Guide to Fish Diseases*. Published by Bassleer Biofish