ICHTHYOPHTHIRIOSIS

(Ich – White spot disease)

It is one of the most common fish diseases. Factors becomes localized in skin, gills and fins

Agents ; Ichthyophthirius multifilis
0.2-1 mm. until it is silicified.
The nucleus of the parasite is in the form of a horseshoe

There is a cyst stage at the base of tank .
Young parasites hold on to fish skin, gill and fin

Ich is one disease that is readily identified by most aquarists. Predominat signs include small White spots over body. Parasites (or theronts) appear round to oval and may be from 30 µm to 1 mm in diameter. The organism moves slowly by means of cilia with a high-power objective. The motion is typically a rolling motion where the parasite rotates across the epithelia surface. The horseshoe -shaped nucleus is often visible and aids in identification.

The free swimming infective ciliated theronts are usually pear-shaped, actively motile, and about 30-45µm in diameter. The white-spot observed on the effected fish is called the trohont, and eventually the thropont enlarges, breaks through the epitelium, and drops to the bottom of the aquarium , where it attaches to any objects, such as gravel or tubing. At this point the organism is refered to as a tomont. The time taken for development on the fish is very temperature depentdent and requires 3 to 4 days at 22°C , up to 11 days at 15°C , and nearly 30 days 10 °C.

The tomont beings to undergo mitosis, and this mitosis will result in hundreds of ciliated theronts that are released into the water. These organisms actively swim and, on encountering a host fish, attach and actively penetrate skin, gill and fin, where they enlarge until they are visible a white spot

Free-swimming newly excysted ciliated organisms have only about 48 hours in which to find a fish before they die.

The disease is usually observed several days after introducing new fish to an aquarium.

Medicants available do not penetrate the encysted trophonts. All treatments is directed towards preventing

Malachite green and formaldehyde-malachite green mixture have also been used successfully.

Elevating water temperatures several degrees over normal aquarium temperetures for 5 to 7 days will tend to limit the infection by adversely affecting the heat-sensitive organisms as well as by enhamcing the İmmune response of the fish.

Fish can be treated in a separate aquarium equipped heater and filter.

Parasites in the main aquarium eventually die for lack of a host.

ICHTHYOBODOSIS

These flagellates reproduce by simple binary fission. Transmission appears to be direct contact or exposure to water
That has held infected fish within several hours.

The organisms are actively motile, small (7 to 15 µm long), and somewhat comma shape. They can be seen as free-swimming forms or attached to cells by their flagella. When attached, the parasites move in a characteristic circular form.

The Ichthyobodo organism feeds directly on epithelia cells by penetrating with its gullet.
The parasites can destroy gills and skin epithelium.

This parasite is succeptile to common antiprotozoal therapies.

CHILODONELLOSIS

The principle signs of Chilodenella infestation are respiratory distress, clamped fins, and depression. Excessive mucus production is also common. Death can be sudden wiyh minimal external signs of disease. Examination of the gills of infected fish will reveal heavy loads of oval, flattened organism, with a shape suggestive of a valentine heart. Cilia appear in rows. The organism moves with a characteristic, slow circular movement and appears to glide. Organism begin to die within minıtes of preparation of the wet mounts. Dead organism are round with a granular cytoplasma and a distinct oval macronucleus that is about one-third the length of the parasite.

The organism feeds by pinocytosis after contacting epithelia cells, where it feeds on the cytoplasmic contents. It reproduces by simple binary fission and does not form any resting spore stage. It can not survive more than a few hours off a host.

This parasite is susceptible to commonly used parasiticides.