

ASVP DIAGNOSTIC EXERCISE No. 22

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History:

Aquarium view of a Pearl Gourami (*Trichogaster leeri*). It had recently been imported, having been in quarantine for a week before reaching the retail store. Three out of 20 individuals were affected in a single-species tank. Their demeanour and appetite were unaffected. The retailer had treated with in-water triple sulfa with no response.

(Note: the slender string-like appendage originating from the anteroventral midline of the fish's abdomen is actually a pelvic fin modified into a feeler).

Lymphocystis (Iridovirus Infection)

Lymphocystis is a viral disease of coldwater and tropical fish that results in the formation of nodular lesions on the skin and fins of the fish.

Clinical Signs

The lesions are whitish, raspberry or cauliflower-like overgrowths of subcutaneous hypertrophied fibroblasts infected by the virus. Occasionally, lymphocysts can also form in the mesenteries, peritoneum and internal organs of the affected fish and this can lead to systemic infection and occasionally death.

The disease is of little pathological concern to ornamental fish producers, apart from the fact that the disease is highly contagious and the fish don't look too 'ornamental' whilst they have the lesions. The mortality is very low (unless the nodules form around the mouth and impair ingestion of food) and the virus is self-limiting (eventually the nodules drop off of their own accord).

The virus is more of a problem in aquaculture as many fish can be affected at once, leading to a reduction in growth rates, unsightly appearance of the skin and fins and increased risk of secondary bacterial infection.

Diagnosis:

Diagnosis is made by biopsy of the nodules. The figure is of a wet squash preparation of nodules.

Histologically, the masses are made up of giant fibroblasts (macrocytes), with thick walls and no nucleus (hey, with fish photomicrographs, including a scale is easy!).



Treatment

Treatment of the virus is not required. The virus is self-limiting and surgical removal of the masses will often just result in regrowth. Some aquaculture facilities will destroy infected fish to reduce the spread to other farmed fish stocks.

The disease is thought to be transmitted through skin abrasions, so reduction in stocking density, fish aggression and rough handling of fish can help to reduce the spread of disease, as can isolation of infected fish and implementation of good quarantine practices aimed at reducing the buying-in of diseased fish. As the virus may enter systems through the water supply, some aquaculture facilities have found it

beneficial to treat incoming water with UV light to destroy the organism.