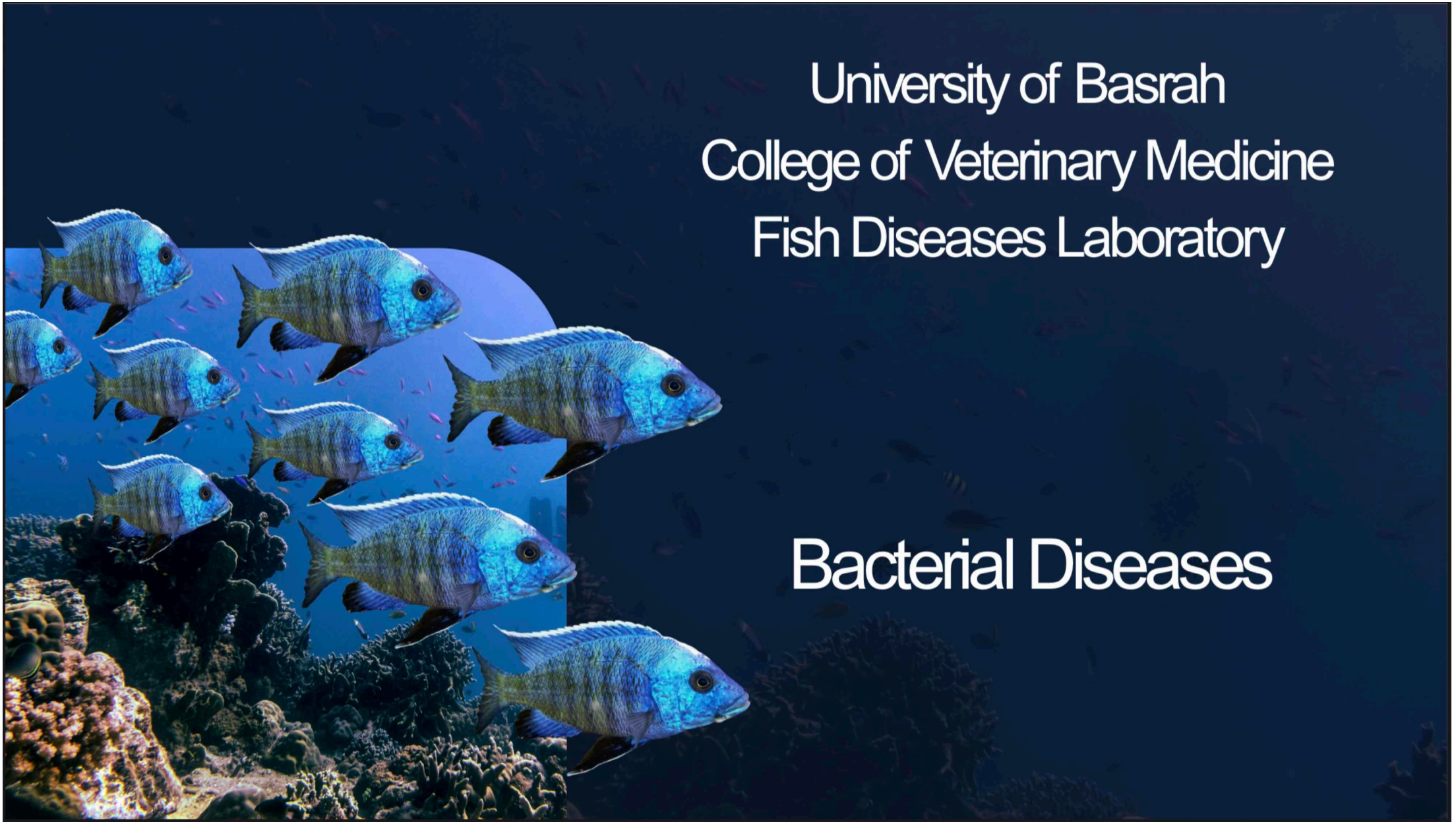

University of Basrah
College of Veterinary Medicine
Fish Diseases Laboratory
Bacterial Diseases

Bacterial Hemorrhagic Septicemia BHS

(Infection abdominal dropsy)

It is a highly contagious disease in fish, with the Cyprinidae family being the most susceptible. Additionally , common carp reared in ponds are more .sensitive to the disease than those in natural waters

Etiologica Agent

1-Aeromonas hydrphila
2-Aeromonas sobria
3-Aeromonas veronii

Clinical signe

External Signs:

1-Hemorrhages on the skin, fins, and o fin bases.

2-Skin ulcers, especially on the sides, head, and tail.

3-Abdominal swelling (ascites) due o to fluid accumulation.

4-Exophthalmia (pop-eye). °

5-Pale or congested gills. °

6-Fin rot and dark discoloration of the skin.

7-Abnormal swimming behavior, lethargy, and slow movement.

Internal Signs:

1-Enlargement of the liver, spleen, and kidneys.

2-Congestion and hemorrhages in internal organs (liver, intestine, heart).

3-Presence of bloody fluid in the abdominal cavity.

4-Sometimes tissue necrosis or erosion in internal abdominal.

Prevention

Identify and eliminate sources of environmental stress through proper management of stocking, feeding, transportation, and water quality; this alone can prevent the occurrence of the

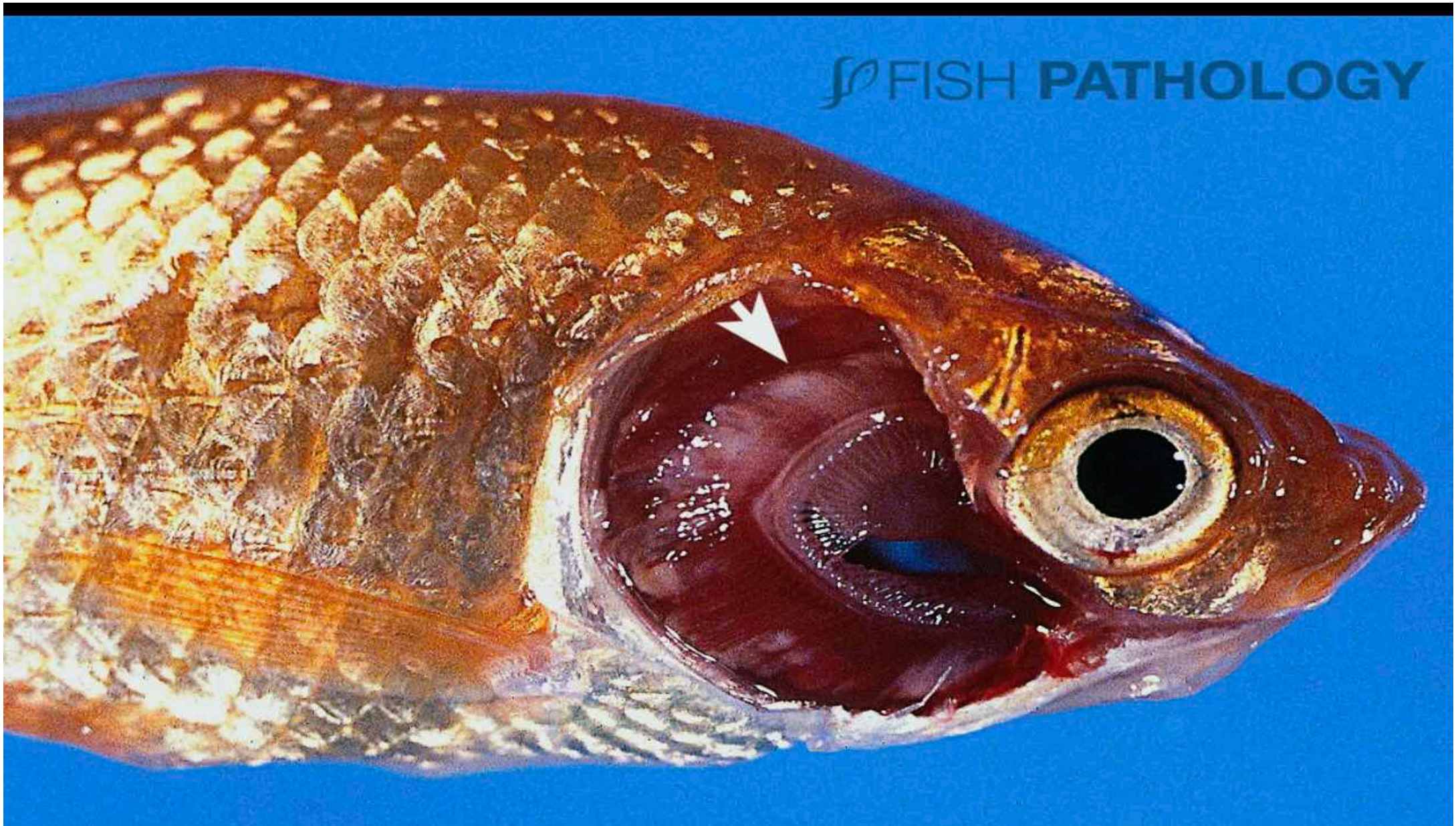
.disease

.Avoid handling fish when they are weak or when environmental conditions are below optimal levels

.Fish should never be traded or transported during an outbreak

Treatment

Oxytetracycline: 70-100 g per 100 kg of feed for 10 days, or 2 g per 1 kg of fish mixed with prepared feed, or injected at 3 g per 300-400 g of fish body weight.


FISH PATHOLOGY

White Skin Disease

Etiological Agent

The causative agent of the disease is the bacterium Pseudomonas dermoalba, which is Gram-negative.Big head fish and Silver carp are among the most .susceptible fish species to this disease

Epidemiology and Course of Disease

Mortality appears 2–3 days after infection. The disease is commonly observed in May and June. Fish younger than one year old are more susceptible to the infection. The bacteria affect the skin, central nervous system, and the balance & coordination .system

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:Pathogenesis (Disease Process)

.1️⃣Water becomes contaminated with bacteri

.2️⃣Bacteria enter through small wounds or damaged fins

3️⃣ They multiply in the skin and destroy surface cells⬇️

.4️⃣White patches and skin erosion appear

⬇️

.5️⃣If untreated → infection spreads to muscles or internal organs

Clinical Signs

1-The disease first appears as whitening of the skin around the dorsal fin and . .caudal fin

تسمية توضيحية

2- A characteristic sign is that affected fish remain near the water surface, and . .often, the dorsal fin protrudes out of the water

3- A pale yellowish color appears or turns reddish in the back region. The infection . .spreads to the area between the dorsal fin and the anal opening

Diagnosis

1- Case history .

2-Clinical signs .

.3- Isolation and identification of the causative agent .

Control and Prevention

.1- Remove predisposing environmental factors .
.2- Apply good management practices in fish farms .

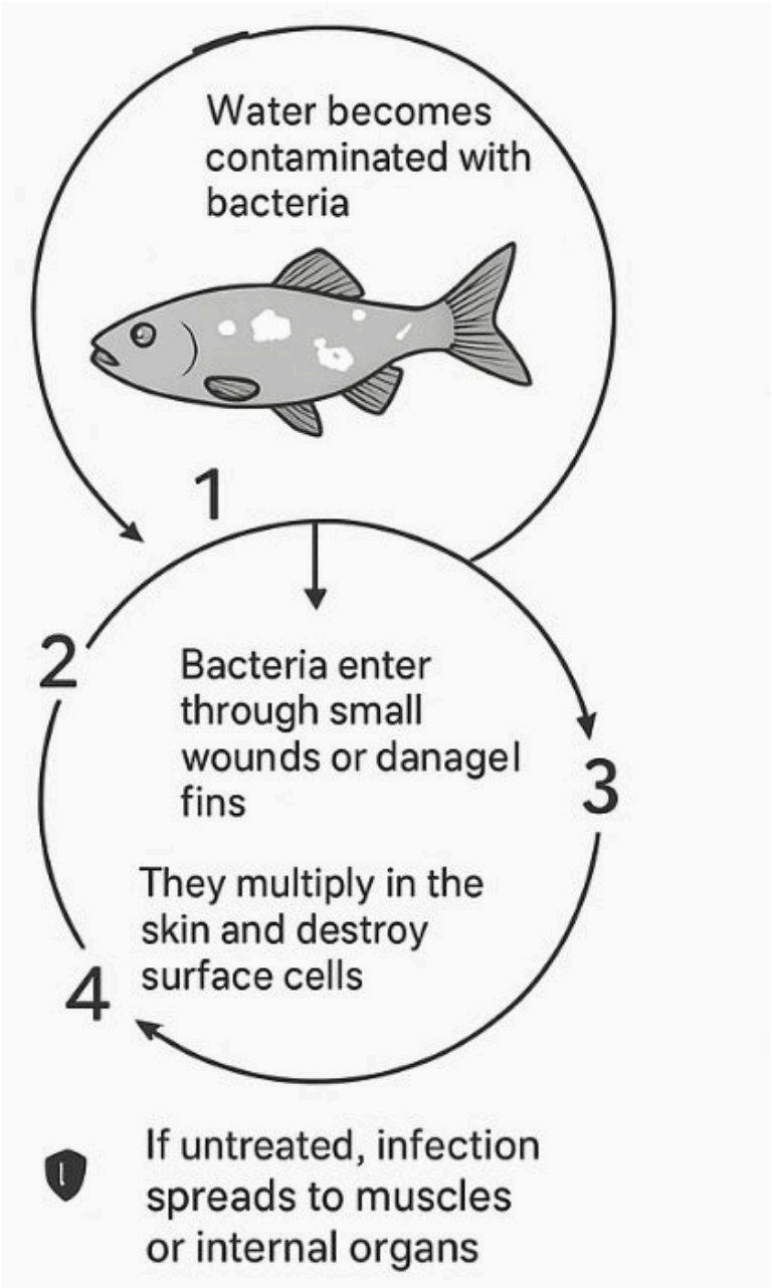
.3- Sterilization and disinfection of water to reduce disease spread .

Treatment

.1- Add 150–200 mg of Chloramphenicol per 1 liter of water for 5 days .

.2- Use Zinc sulfate or zinc chloride (2 mg/L of water) for 2–5 hours .

3- Copper sulfate ($CuSO_4$) can be used at a concentration of 1:2000 for 2–3 . .minutes, or 3 g per 10 liters of water for 2–3 minutes


Water becomes contaminated with bacteria
1
2
Bacteria enter through small wounds or danagel fins
3
They multiply in the skin and destroy surface cells
4
If untreated, infection spreads to muscles or internal organs

Bacterial Gill Disease (BGD)

Causative Agent:

The primary bacterium responsible for Bacterial Gill Disease (BGD) is Flavobacterium branchiophilum, a Gram-negative, filamentous bacterium that specifically colonizes fish gill tissues. Other species like Flavobacterium columnare and Cytophaga spp. may also be associated in mixed infections.

Predisposing Factors

High stocking density

Low dissolved oxygen

High organic load or poor water quality

Elevated ammonia and nitrite levels

Physical or environmental stress

Clinical Signs

Fish gather near water inlets or surface (seeking oxygen)

Rapid gill movement and gasping

Anorexia (loss of appetite)

Gill discoloration or erosion

Microscopic examination shows gill filament fusion and bacterial mats on gill lamellae


GILL DISEASE

Diagnosis

Wet mount of gill tissue: reveals filamentous bacteria attached to lamellae.

Histopathology: shows lamellar necrosis and hyperplasia.

Bacteriological culture: isolates Flavobacterium branchiophilum.

Treatment

Improve water quality (increase aeration, reduce organic matter).

Reduce stocking density.

Use chloramine-T or hydrogen peroxide baths (under veterinary supervision).

Antibiotic therapy may help if bacterial infection is confirmed, but always under prescription.

Prevention

Maintain optimal water quality and oxygen levels.
Avoid overstocking and reduce stress factors.
Regular monitoring of gills in intensive systems.


THANK YOU
Edited by : Qais ziad