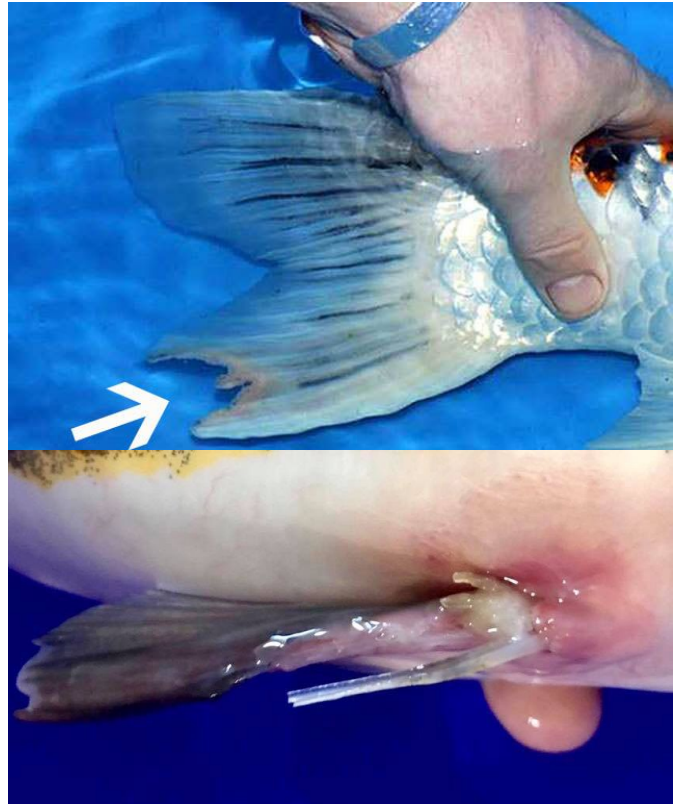


Fin Rot

Fin rot is easily seen with the naked eye. There are a number of bacteria associated with fin rot and also ulcers; *Aeromonas* and *Pseudomonas* bacteria. This type of problem is usually associated with a number of contributing factors; poor maintenance of filters leading to poor water quality, damage to fins during spawning, overcrowding, pox on the fins, netting, feeding, accidents or parasites resulting in the fish immune system becoming compromised.



If left untreated, entire fins can be eaten away which leaves the koi open to problems with their osmoregularity (internal fluid balance) resulting in kidney damage and death.

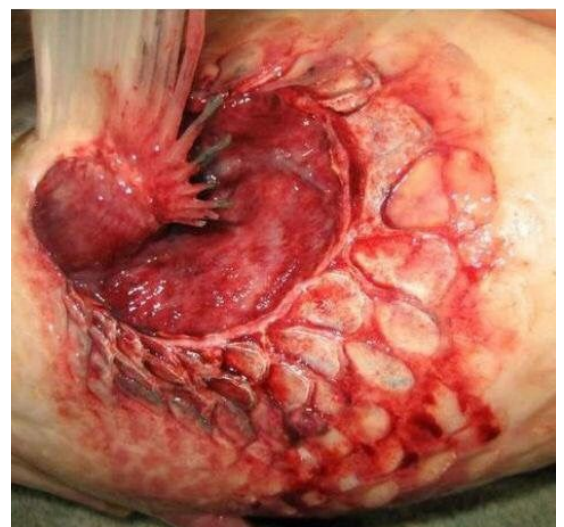
Fortunately, if it is caught early then treatment can be provided quite easily.

Symptoms

Fins become eroded, red, tatty or completely eaten away by the rot. The affected fish may isolate itself or spend long periods of time on the pond floor. There may be red or raised scales near the damaged fin where secondary bacterial infection may be taking hold. In fish that have gone unnoticed, the fin may rot away completely resulting in tissue damage to the body. If this is the case the fin will not grow back. In light damage, fins will eventually grow back.

Identification

Fin rot is easily visible. The image to the right shows where infection from the fin rot has spread to cause an ulcer to the area around the pec. Regularly inspect your koi for fin damage. Windows are a great advantage in allowing us to check the underside of the koi when they come up

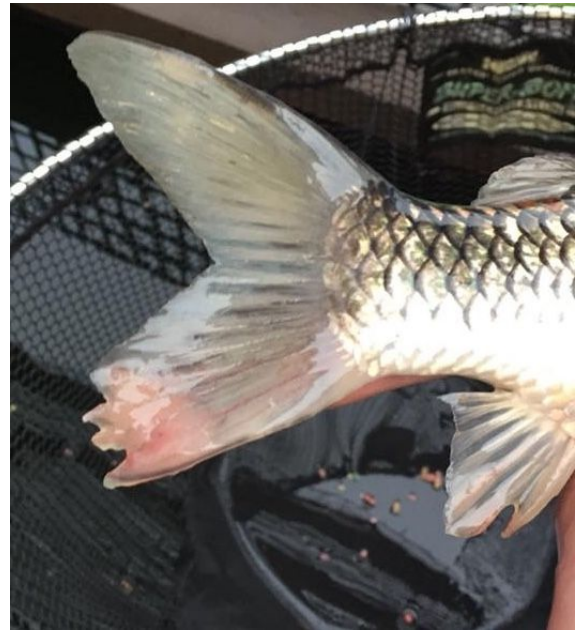


to feed. If you don't have windows on your pond then make sure you bowl up koi and inspect their bellies or you can see their underside when feeding. Skin scrapes should be undertaken to rule out possible parasite problems and a full set of water tests.

Treatments

As with any problem, the sooner treatment is given the better the outcome. The affected koi should be sedated using an appropriate method such as Kusuri Masuizai. Ensure you have all your equipment to hand before sedating the koi.

You will need: A sturdy comfortable work space with good lighting. Antibacterial spray like Roccal, would cleanser, sharp strong scissors, cotton buds, paper towels/gauze, small pot of Hydrogen Peroxide (HP) or Potassium Permanganate (PP) paste to stop bleeding, bone cutters (for cutting through thick parts of affected rays or bone). See the list further down. You can get basic treatment kit from most koi dealerships.



1. Disinfect your tools in a bowl/small jug with boiling water and something like TCP. Be careful not to scald yourself!
2. Ensure you have all your equipment ready and to hand.
3. Catch the affected koi and transfer it into a bowl using a koi sock.
4. Measure out the required amount of sedation and add this to the bowl and mix well. Please note: Kusuri Masuizai will not work below 14C.
5. Wait for the koi to roll over and leave it a minute or two more. Once it is sedated gently lift it out of the water and hold it for a minute just above the surface to check it doesn't start flapping around. If it does wriggle, return it to the sedation for a little longer. Repeat this step after a couple more minutes. Larger fish may take much longer to sedate than smaller ones, subsequently they will usually take longer to recover.
6. Once the koi is sedated place it on the wet towel on a sturdy work surface. Place the



second wet towel over its head and fold it so it is also covering the tail. (you may need to position the fish differently depending on which fins are affected).

7. Thoroughly clean the affected area with your Roccal or disinfectant solution on both sides of the fin. Wipe away the cleanser and repeat with fresh gauze.

8. Examine the area, you want to be cutting the fin past where there is rot and where the tissues are nice and healthy.

9. Using some strong sharp scissors cut away the affected ray just before the rot. The image to the right shows the ideal place to cut indicated by the red line. You may need to use bone cutters on the thicker parts of the fins.



10. Use the PP/HP to cauterise any bleeding. Dab it along the edge you have just cut. It may fizz a little when you apply it. Wipe away the frothe then repeat. Rinse with fresh water and dab dry using gauze or paper towel. Don't use cotton wool as it can leave fibres on the wound which can trap bacteria.

11. Apply antibac/tamodine/propolis to the edge and then dust over the orahesive powder. Blow away any excess powder being careful to avoid the eyes and gills.

12. Apply the top coat sealer and allow to dry until it is no longer tacky.

13. Once dried return the koi to the pond and hold it in a flow of water or over an air stone to allow it to recover. To speed things up you can gently open and close its mouth, this forces water over its gills.

14. Getting the Koi into a heated quarantine or hospital tank with salt is the best way to help heal fin rot. Healing may be delayed and sometimes, not occur in colder water as the fishes immune system will not be at its best. Optimum temperature to stimulate healing is 22-24C. If you are unheated, ensure you observe the koi while it heals. You may still need to put it into a quarantine tank with a buddy until it is stronger.





Acriflavine: Is a good all round antibacterial treatment to aid with healing. It can also be used for Saprolegnia fungal infections. Acriflavine is widely available as a premixed liquid formula but may also come as a powder which requires careful weighing and mixing prior to use. It can be used with sturgeon. Acriflavine is not effective below 11°C. 10ml to 100 gallons.

Salt: Ensure you use the Pure Dried Vacuum (PDV) salt as this does not contain anti-caking agents which can be harmful to koi. For use with chemicals: 1/2 ounce per gallon (0.33%). Use an accurate salt meter.

Tools & Equipment

- Bone Cutters.
- Gloves.
- Sharp strong scissors.
- Gauze.
- Cotton Buds.
- Small medicine pots.
- Kitchen paper.
- Forceps/Tweezers.
- Tamodine/Iodine/Povidine.
- Hydrogen Peroxide/PP.
- Towels x2 (for putting under & over koi).
- Sedation - Kusuri Masuizai.
- Bowl.
- Cotton buds.
- Roccal cleanser.
- Antibac.
- Orahesive & Sealer.



Bone Cutters



Forceps



References

<http://www.dankoi.com/Koi-Diseases/Finrot-and-Ulcers-p-54.html>

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.874.1775&rep=rep1&type=pdf>

<https://www.pond-life.me.uk/forum/viewtopic.php?t=8190>

<https://www.aboutfishonline.com/articles/finrot.html>

<https://pondinformer.com/how-to-treat-koi-fin-rot/>

Videos

Treating Fin rot. <https://www.youtube.com/watch?v=9MAuhmWkJUE>

QT setup. <https://www.youtube.com/watch?v=d3IAKeimfgI>

****Warning/Disclaimer****

- Medications are used at your own risk and it is your responsibility to calculate dosages accurately according to your pond volume.
- Check parameters prior to any treatments being administered.
- Always ensure you have an accurate diagnosis before introducing chemicals.
- Follow the directions for use on the packaging.