

10 YEAR OLD KOI

Diagnosed with Trichodina & Gyrodactylus



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Sunshine is a 10-year-old koi carp belonging to a veterinarian friend of mine, who reports that Sunshine now just stays at the bottom of the pool, scraping along the floor and eating little. He is also plumper than usual and has whitish accretions around the eyes.

For a further diagnostic assessment, we catch Sunshine and put him in a blue tub, to make a really close inspection. Mild anesthesia with MS 222 allows us to perform further examinations. On inspecting his abdomen, we notice Sunshine has pronounced reddening over his entire lower abdomen, with individual scales projecting out and highly inflamed. He also makes a more roundish impression.



We performed the following investigations:

- Smear sample of skin and gills for on-site diagnosis of parasites under the microscope
- Swab sample of the affected inflamed scales to detect secondary infections (in the laboratory by antibiotic sensitivity test)
- Blood sample with evaluation in the practice using the CDP rotor

Result of smear sample:

Numerous Trichodina and Gyrodactylus

Gyrodactylus is a flatworm from the class of hookworms. They are viviparous parasites. Under the microscope, the embryo and its attachment organs are readily visible inside the worm. It is an ectoparasite and mainly attacks the skin of fish. Its attachment organs in the form of hooks, teeth and clamps enable it to anchor itself in the skin and gills of its host. The migratory movements of the parasite cause skin irritations and damage to the mucosa and gills. Secondary infections are always a major problem with Gyrodactylus. Trichodina is a ciliate easily recognized under the microscope. Its size and shape (circular saw blade) are also identifiable by the layman even with relatively simple microscopes.

Since the abdominal inflammation is already well advanced, Sunshine is given an injection of antibiotic and

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we additionally treated the entire pool and the remaining carp with an antiparasitic agent to combat the Trichodina and Gyrodactylus. We return Sunshine to the pool and I drive to the practice to do the blood work. The blood parameters are all normal and thanks to the blood findings, which we generated using a small amount of blood and which - thanks to Abaxis - are ready after only 15 minutes, we continue with the further treatment and diagnostic work-up.

As always, it is the weekend and without the preliminary on-site blood analysis using Abaxis diagnostic instruments, I would have had to wait until Tuesday for the results - Results in 15 minutes are always better.

Results of Blood Tests

ALB	1.6
ALP	57
ALT	22
AMY	7
TBiL	1.8
BUN	3
CA	9.4
Phos	7.5
CRE	0.2
GLU	60
Na	127
K	3.7
TP	3.0
GLOB	1.4

After 3 days we remove Sunshine again from the pool. The whitish deposits and the abdominal inflammations have already greatly decreased. Bacteriological analysis detects 2 pathogens sensitive to the antibiotic injected 3 days previously. My colleague reports that Sunshine had been scraping less along the bottom on the day after the treatment, and now comes to the surface to feed. He also swims regularly around the pool and no longer just lies pathetically at the bottom.

Only Sunshine's still somewhat fuller figure is still a cause for concern and we therefore transfer him to a small quarantine pool at the practice; we record X-rays and ultrasound scans to rule out tumors, hardening of spawn etc. Everything is fine and he receives his 2nd antibiotic injection for the next 3 days and I take another control smear sample of the skin and gills: Trichodina and Gyrodactylus have disappeared.



Summary:

After another 3 days we again administer antibiotic and this time he's much more difficult to catch than before. Treatments of this kind with multiple injections of antibiotic are only possible in small pools easily accessible from all sides, because otherwise the carp elude capture. 14 days later I meet my colleague at the pool for the final follow-up control. The abdominal reddening has disappeared completely and all the koi are lively and are feeding well.

