

**RADIOGRAPHIC, ULTRASONOGRAPHIC AND HISTOPATHOLOGICAL FINDINGS
OF A POLYPOID-PAPILLARY HYPERPLASIA OF URINARY DUCTS
IN A REDHAED CICHID *PARANEETROPLUS SYNSPILUS***

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Work type: **Original Research**

Topic: **Exotic Animals**

*Scope of work - There are few reports of spontaneous neoplasm or tumor-like lesions of the urinary system in the literature occurring in fish and nephroblastoma is the most frequent. This case report describes the radiographic, ultrasonographic and histopathological findings of a severe papillary hyperplasia of urinary ducts in a Redhead Cichid (*Paraneetroplus synspilus* C. L. Hubbs, 1935).*

Materials and methods - Differential diagnosis included swim bladder inflammation, ascites, constipation or neoplasia. An antibiotic bath treatment with enrofloxacin at a dose of 2 mg/l for 5 days was administrated without success. Following radiologic and ultrasonographic investigations were carried out. For radiologic exam the fish was wrapped in a thin wet towel and placed in right lateral and sternal recumbency on the film cassette. On the lateral whole body radiograph a round homogenous soft tissue mass was visible. Otherwise the radiographs were normal. At ultrasonographic examination the unsedated fish was held in right lateral recumbency near the water surface. Twodimensional real-time ultrasonography was performed with an 12-MHz linear ultrasound transducer. A round not well demarked structure with inhomogenous wall and a cystic area was located in the middle and caudal coelomic cavity. Later an exploratory laparotomy was made. For anesthesia IM injection of 30 mg/kg ketamin in the dorsal saddle was administrated. When a good anesthesia level was achieved the fish was transferred to the surgery set up and an anaesthetic-water-circuit to provide oxygen was used. Both the urinary ducts were extremely dilatated, fused, with irregular surface and with a cystic appearance. The cystic-like structure was drained, a transmural biopsy was obtained and the incision was surgically closed.

Results - Histologically the urinary ducts had wall thickened; the mucosa appeared undulating arranged into thin mucosal papillary folds or appered multifocally raised-elevated by pedunculated or sessile polypoid structures that protruded into the lumen. The mucosa and the polypoid structures were covered by hyperplastic well-differentiated transitional epithelium with papillary growth and with a supporting stroma. Multifocally glandular metaplasia was present within lamina propria and diffusely lymphangectesia was observed. Two weeks after surgery the clinical condition severely deteriorated thus euthanasia was elected. Necropsy confirmed the histological findings observed in the biopsy and moreover severe hydronephrosis was present.

Conclusions - The severe polypoid and papillary hyperplasia of urinary ducts caused urinary obstruction with hydronephrosis as observed at necropsy. Papillary hyperplasia of low urinary tract is considered a precursor lesion of low-grade papillary urothelial neoplasms.

Bibliography

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