

Marie Curie Training Courses

Summer School 2005 – Fish F04/1474

Slide No. F04/1474 and F05/597: Tissue from an ornamental fish

Description of histological findings

Gill, diffusely, but accentuated at the base of the secondary lamellae, the epithelium is moderately to severely hyperplastic. Multifocally, secondary lamellae are fused. The epithelial cells are moderately to severely hypertrophic. Multifocally there is single cell necrosis characterised by hyper eosinophilia of cells, karyopycnosis and karyorrhexis.

Between the secondary lamellae are cut sections of trematodes, appr. 0.1 mm long, characterised by a tegument, a muscle layer, no body cavity, a reproductive and a digestive tract and two brownish, apical hooks. Within the stroma of the gills there is a diffuse infiltration with moderate numbers of lymphocytes and macrophages.

Only F04/1474: Embedded in the hyperplastic epithelial tissue and occasionally in the supportive connective tissue are several round organisms, 5-7 μm in diameter, with an eosinophilic hyaline cytoplasm and occasionally marginated nucleus, interpreted as acanthamoeba. There is a diffuse infiltration with low numbers of eosinophil like cells.

Morphological diagnoses

Gill, diffuse severe chronic proliferative branchitis with intralesional trematodes and acanthamoeba (F04/1474)

Etiology

Dactylogyrus sp.
Acanthamoeba

Scoring system	Points
<u>General:</u>	
Design	2
Tissue	1
<u>Descriptive features:</u>	
Epithelial hyperplasia	2
Epithelial hypertrophy	1
Single cell necrosis	1
Description of trematodes	4
Lymphocytes, macrophages	1
Acanthamoeba	(1)
Eosinophil like cells	(1)
<u>Morphological Diagnoses:</u>	4
<u>Etiology</u>	2