Parasitological and comparative pathological studies on monogenean infestation of cultured sea bream (*Sparus aurata*, *Sparidae*) in Egypt

Nisreen E Mahmoud, Mahmoud A M and M M Fahmy

Cairo University, Egypt

A total of 400 Sea bream (*Sparus aurata*) were sampled from a private fish farm in Ezbet Elborg area, Domietta province, Egypt and were investigated in terms of monogenean parasites. The prevalence, seasonal dynamics, mean intensity as well as the histopathological influence of the detected monogeneans were estimated. The standard parasitological methods were used in the survey and yielded four monogenean species on the Sea bream gills: *Furnestinia Echeneis* (58.59% of invaded fish), *Encotyllabe spari* 32.81%, *Sparicotyle chrysophrii* 25.78%, and *Choriocotyle chrysophrii* 17.19%. The total prevalence was 32% and the highest rate was recorded during summer. With the exception of *Encotyllabe spari*, the detected parasites are new records for the monogenean fauna of Egypt (new geographical record) and also Sea bream (*Sparus aurata*) is a new host record for the monogenean *Choriocotyle chrysophrii*.

Histopathological examination revealed different pathological changes in the affected branchial tissue. The lesions depended on the type of the detected monogenea. Some parts of the branchial tissue showed hyperplasia of mucous secreting cells, hemorrhages and oedema. Necrosis of the gill lamellar epithelium was a common finding at the sites of parasites attachment. In these sites, the necrotic tissue debris was noticed between gill lamellae. In the necrotic part, the secondary lamellae were fused, atrophied with mononuclear cells infiltration. The monogenean parasites were prominently noticed and attached to the gill filaments. The anterior part of the parasites in some cases appeared attached to the epithelial lining of the secondary lamellae with desquamated cells. In other cases, cross sections of the parasites were embedded in the branchial tissue either gill filaments or gill rakers. Focal areas of denuded epithelium were noticed, in such cases, prominent mononuclear cells infiltration was common.

Biography

Nisreen E Mahmoud has completed her PhD in 1994. She is Working as a professor of Parasitology in Faculty of Veterinary Medicine at Cairo University - Egypt. She is a leading specialist of fish parasites. Her scientific interests include problems related to parasitic diseases and pollution in fresh water and marine aquacultures. She is an active participant of the international scientific conferences and symposiums. She has published more than 45 papers in reputed journals. She is the head of the Egyptian society of parasitology and pathology of aquatic organisms, also a member of: Egyptian Society of Environment and Aquatic Animal Health, The Zoological Society A R. E, The Fish Committee of the General Organization for Veterinary Services, Egypt, The Fish Committee for the solution of Lake Naser fish helminthes problems, Egypt, The Egyptian Society of Veterinary Parasitology.

dmisreene@hotmail.com