

Histological structure of kidney in Sobaity, *Sparidentex hasta*

Asiyeh Mirali¹

Abdolali Movahedinia^{2*}

Rahim Abdi³

Amirparviz Salati⁴

1, 2, 3. Department of Marine Biology, Faculty of Marine Sciences, University of Marine Science and Technology, Khorramshahr, Iran

4. Department of Fisheries, Faculty of Marine Natural Resources, University of Marine Science and Technology, Khorramshahr, Iran

*Corresponding author:
amovahedinia@yahoo.com

Receive date:

Acceptant date:

Abstract

Sobaity, *Sparidentex hasta*, is one of the native fish species in Iranian aquatic environments and present in Persian Gulf and related estuaries. Its successful aquaculture model is already doing in Iranian mariculture centers. In the present study, 24 kidney samples from Sobaity were histologically investigated under light microscopy. For this purpose, kidney sampling was done after anesthetizing the fish and dissection. According to the macroscopic studies, kidney in this species is dark red in color and set along the backbone from head up to the end of the abdominal cavity. Sobaity has mesonephric kidney that is common in teleost. Histological studies were done on different parts of kidney (head kidney and trunk). Tissue blocking in paraffin, sectioning and staining (Hematoxylin and Eosin method) was performed according to the routine histological protocol. Photomicrographs showed that kidney in Sobaity is mesonephric, similar to other teleost fish, and both hematopoietic and excretory parts can be identified. According to the results, head kidney plays hematopoietic role of the kidney, however the nephrons are present in this part. Excretory elements are consisting of renal glomeruli and tubules. The first part of the renal tubule is Bowman's capsule. Other parts of the renal tubule are composed of neck section, first and second segments of proximal convoluted tubule, distal convoluted tubule and collecting tubule, respectively.

Keywords: Excretory system, Renal glomerulus, Nephron, Hematopoietic tissue, *Sparidentex hasta*.