

# Macroscopic and Microscopic Study of the Liver and Spleen in Longtail Carpetshark (*Chiloscyllium arabicum*) from Persian Gulf

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## Abstract

The present study aimed to study the histomorphological structure of spleen (as a hematopoietic organ) and liver (as an organ involved in detoxification) in Longtail carpetsharks (*Chiloscyllium arabicum*) from the Persian Gulf. In this regard, 30 *C. arabicum* were caught at the Hendijan port, located at the northwest of the Persian Gulf in 2016. The fish were sacrificed and then the liver and spleen tissues were moved to bouin's fixative solution for 48h. Tissue samples were then processed using the routine histological methods and 5-6  $\mu\text{m}$  tissue sections were prepared. Then, tissue sections were stained using hematoxylin-eosin staining method and studied under the light microscope with dinolite lens. Based on the results, the liver was consisted of several lobules in which hepatic cords radially arranged around the central vein. Sinusoids were observed among the hepatic cords. Hepatocytes with euchromatin nucleus were filled with the lipid vesicles. The spleen was consisted of reticular stroma and parenchyma. The spleen parenchyma was divided into two parts including red and white pulps. The central arteriole surrounded by lymphoid tissue located inside the white pulps. The red pulps consisted of different kinds of lymphoid cells and red blood cells that arranged as cords, called splenic cords. In conclusion, many structural similarities were found in the liver and spleen between *C. arabicum* and other fish species.

Keywords: *Histology, Liver, Spleen, Chiloscyllium arabicum, Persian Gulf.*

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