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Histomorphological study of liver, spleen and pancreas in four cichlid species

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Abstract

The cichlidae family has more than 1300 species which in turn have great species morphologic differences. In this study, histology of liver, spleen and pancreas of four cichlid species (green terror cichlid, Oscar, giraffe cichlid and Texas cichlid) were compared. For this purpose, four apparently normal fish specimens from each species were selected after killing of which, tissue samples were taken. The sections stained with two methods (Haematoxillin- Eosin and Periodic acid Schiff). The results showed that all liver sections contained pancreas tissues around the liver blood vessels. Liver cells size in two species (green terror cichlid and giraffe cichlid) was significantly bigger than the two other species. The liver cell to pancreatic cell ratios also was significantly higher in two species. The liver size in giraffe cichlid, was even significantly bigger than the green terror cichlid. Exocrine pancreatic cell size in all 4 species showed no significant difference. The spleen in four fish species showed different degrees of amount and intensity in melanomacrophage centers. In PAS stained sections, only the pancreatic tissues showed more PAS positive reaction that may be due to the more glycogen content. The liver showed a weak PAS reaction. The bigger size formation of liver cells in two species can be due to feeding regime or simply a species specific trait. Yet **more investigation** is still **needed** to determine the importance of these findings.

Key words: Cichlid, Oscar, Histology, Liver, Spleen

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