

Immunohistochemical expression of Matrix Metalloproteinase 2 and Tissue Inhibitors of Matrix Metalloproteinase 2 in Hepatic Fibrogenesis in Dogs

Andras-Laszlo NAGY, Flaviu TĂBĂRAN, Pompei BOLFĂ, Marian TAULESCU, Adrian GAL, Cornel CĂTOI

UASVM, Faculty of Veterinary Medicine, 3-5, Mănăştur Street, 400372, Cluj-Napoca, Romania, e-mail: nagyandras26@gmail.com

Hepatic fibrogenesis is a complex process and is due to both hypersecretion of extracellular matrix proteins and to the inhibition of matrix degradation by the tissue inhibitors of matrix metalloproteinases.

The present study is aiming to determine the immunohistochemical expression of MMP2 and TIMP-2 in active hepatic fibrogenesis in dogs.

The study was realized on 10 hepatic samples, obtained during necropsy at our faculty's Pathology department. Immunohistochemical exam was realized using antibodies against MMP2 and TIMP-2

In our study, MMP 2 was strongly expressed by the periseptal hepatocytes some intralobularly located hepatocytes in the regions of sinusoidal capillarization and by inflammatory cells within fibrous septae. Hepatic stellate cells and Kupffer cells showed strong cytoplasmic labeling, while sinusoidal endothelial cells expressed the protein slightly and inconstantly.

In the present study we showed that periseptal hepatocytes and hepatic stellate cells coexpress MMP2 and TIMP-2, in the active fibrogenesis process TIMP-2 expression being dominant.

In dogs, the main source of MMP2 and TIMP-2 are represented by the hepatocytes. The intralobularly located hepatocytes by the secretion of TIMP-2 are involved in the sinusoidal capillarization.