



Comparative Review of Biochemistry and Cell Anatomy of the Hepatic Tissue in Rats Administered Some Anti Hypertensive Drug for a Long Time

Ismail MALKOC ¹, Nihal CETIN ², Durdu ALTUNER ³, Ahmet HACIMUFTUOGLU ²,
Nesrin GURSAN ⁴, Ebubekir BAKAN ⁵, Fatih AKCAY ⁵ & Halis SULEYMAN ^{2*}

¹ Faculty of Medicine, Department of Anatomy, ² Department of Pharmacology, ⁴ Department of Pathology,

⁵ Department of Biochemistry, Ataturk University, Erzurum-Turkey

³ Faculty of Medicine, Department of Pharmacology, Rize University, Rize-Turkey

SUMMARY. The adverse biochemical and structural effects of antihypertensive drugs over a long period (clonidine, methyldopa, rilmenidine, amlodipine, ramipril) on hepatic tissue has been examined in this study. The results are considered to be beneficial for the identification of indications and contraindications in hypertensive patients. Severe bile duct proliferation, portal inflammation, interface hepatitis, focal necrosis and hepatocyte degeneration were demonstrated in the clonidine and amlodipine groups, which had higher oxidant parameters, aspartate aminotransferase, alanine amino transferase and lactate dehydrogenase activity and a higher amount of 8-OH Gua. In the group receiving rilmenidine, all the histopathological findings were the same as those in the clonidine and amlodipine groups, except for bile duct proliferation and interface hepatitis. On histopathological examination of the cell anatomy, it was shown that methyldopa and ramipril caused mild liver damage. While clonidine and amlodipine gave rise to severe liver damage, rilmenidine caused moderate damage, and methyldopa and ramipril led to mild loss of liver function.

KEY WORDS: Amlodipine, Clonidine, Methyldopa, Rat, Rilmenidine.

* Author to whom correspondence should be addressed. E-mail: halis.suleyman@gmail.com