

MAGNESIUM EXCRETION AND REDISTRIBUTION IN RAT TISSUES AFTER DISULFIRAM EXPERIMENTAL ADMINISTRATION

L. Kovatsi, M. Tsougas, H. Tsoukali, and D. Psaroulis

Laboratory of Forensic Medicine & Toxicology
Faculty of Medicine
Aristotle University of Thessaloniki
54006 Thessaloniki, Greece

The aim of the present study was to investigate the effect of disulfiram on the excretion and the distribution of magnesium in rat tissues.

For this reason, 16 male Wistar rats were used. The animals were divided in two groups (test and control rats) consisting of 8 animals each. The test rats received p.o disulfiram 4mg/kg b.w. for a period of 8 weeks.

During the experiment, 24h urine and feces were collected in order to evaluate the effect of disulfiram on the excretion of magnesium.

At the end of the experiment, the animals were sacrificed and the target tissues were removed for analysis.

Wet digestion with concentrated nitric and perchloric acids (1:1) was used and digests were analysed for the determination of magnesium concentration by flame atomic absorption spectrophotometry in air/acetylene flame.

According to our results, disulfiram affects the excretion and the tissue distribution of magnesium in rats. These findings support our previously expressed opinion that drugs or other substances capable to form complexes with elements in vitro, can cause their redistribution into the living organism.