

Age-Dependent changes in rat liver lipid peroxidation and glutathione content induced by acute ethanol ingestion

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The study of the influence of the age of animals (13 to 53 weeks) on total liver thiobarbituric acid reactive substances (TBAR) content showed an increase which is maximal in rats of 39 weeks of age compared to young animals (13 weeks), followed by a diminution in the 53 weeks old group. In this situation, the content of hepatic GSH and total GSH equivalents as well as the GSH/GSSG ratio were decreased with ageing, while GSSG levels were enhanced in the oldest group studied. Acute ethanol intoxication resulted in a marked increase in liver TBAR content in young animals, together with a decline in GSH, total GSH equivalents and GSH/GSSG ratio, and an enhancement in GSSG. These changes elicited by ethanol intake were reduced with ageing. It is concluded that ethanol-induced oxidative stress in the liver is diminished during ageing, despite the progressive decrease in the glutathione content of the tissue observed in control animals. Copyright © 1987

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