

The effect of ethanol injection on kidney histological structure in Mice

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Abstract

Background & Objective: Destructive effects of ethanol consumption have been confirmed on several organs of the body. Nevertheless, classic research which has been done on kidney in this field had less attention. The aim of this study was to evaluate of ethanol effects on light microscopic structure of Mice kidneys.

Materials & Methods: In this experimental study, Balb/c strain mice, equally 40 males and females, weighing 30-35 grams were divided in two equal experimental and control groups randomly. The Mice in control and expermented groups further divided in two sub groups. One sub group received 1mg/gr body weight daily of ethanol for one month, intraperitoneally and other sub group received 1mg/gr body weight of ethanol for two months, intraperitoneally. Control groups divided in two sub groups and Mice received daily salin with same volume as experimental groups. Then, the Mice have been anesthetized and sacrificed and then, subsequently kidneys were removed. Routine histological methods and Hematoxylin and Eosin staining were done. Slides were observed by light microscope.

Results: In experimental group, Mice which received ethanol for one month, interstitial bleeding and inflammatory cells infiltration in cortical zone of kidney was observed. In Mice which received ethanol for two months, we observed massive and concentrated lymphoblastic infiltration, especially on deep medulla around the blood vessels with extending to calyxes and pelvis of the kidney. No histological changes were observed in control groups.

Conclusion: This study showed that the intraperitoneal injection of ethanol cause progressive destruction effects on cortex and medulla of the kidney. These effects depend on duration of ethanol consumption.

Key Words: Ethanol, Kidney, Abnormal changes, Histology

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