

Histopathological Effects of Chronic Opium Dosage on Normal and Diabetic Rats: (1) Effects on the Liver and Kidney

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This study was carried out to detect the histopathological effects of opium on the kidney and liver of normal and experimental diabetic rats, using methods previously reported (reference please). Traditional opium was given orally 10 mg/kg to all experimental rats, except the control negative (normal health) group for 30 days. Diabetes mellitus was produced (in 16 out of 24 adult male albino rats) using intra peritoneal injection of 185 mg/kg alloxan (single dose?). Histological sections showed nothing abnormal in liver and kidneys of non-diabetic rats treated with opium. Alloxan caused appearance of congested blood sinusoids around the central vein associated in some cases with blood clotting. Moreover, edematous reactions were associated with increased accumulation of fats in hepatocytes. Hepatocyte nuclei were generally pyknotic. In diabetic rats given opium few sinusoids were abnormally opened into the central vein. Polymorph nuclear cells also infiltrated the portal tract. Collagen deposition was also increased in the portal tract with some signs of hepatocyte necrosis. Kidney sections of diabetic rats showed dilated blood capillaries that filled with aggregates of red blood cells in few parts of the medulla. Renal tubules appeared to be damaged and edematous. The renal cortex of some diabetic rats showed tubular and interstitial fibrosis. Histological sections of the diabetic rats given opium dosage have shown that the renal glomeruli exhibit some signs of glomerulosclerosis resembled in deposition of the eosinophilic collagen in the loops of the glomerulus and hypercellularity of the mesangium. The thin lopes of the glomerulus disappeared and replaced by eosinophilic scar tissue. Also, the population of the mesangial cells is increased and indicated mesangial cells hypercellularity.

CONCLUSION: The results of this study indicate that chronic opium dosage has a significant histopathological effect on the kidney and liver tissues of addicted diabetes nearly higher than in case of normal addicts.

KEYWORDS: *Alloxan; Diabetes; Histopathology; Kidney; Liver*

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