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Histopathological alterations in liver of mice exposed to different doses of Diclofenac Sodium

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Diclofenac sodium, a member of the acetic acid family of non-steroidal anti-inflammatory drugs is used to retard inflammation, arthritis pain and ankylosing spondylitis. The drug is known to cause severe injury in different tissues due to the formation of reactive oxygen species. The present study is focused on the effect of different doses of diclofenac 4mg/kg/body weight and 14mg/kg/body weight on histoarchitecture of liver from 7-28 days of the investigation. Diclofenac administration resulted in distorted hepatic degeneration and formation of wide areas in the form of sinusoidal gaps. Hepatic fibrosis noticed in different stages of investigation could be attributed to chronic inflammation and reactive oxygen species which results in deposition of extracellular matrix proteins. The abrupt degenerative changes observed during the later stages of the experiment showed maximum damage to the liver and there was enlargement of sinusoidal gaps accompanied by maximum necrosis in the tissues. The various degenerative changes studied in the present investigation were well supported by the other biochemical changes noticed in the liver during other investigations. The biochemical changes included the activity of acid and alkaline phosphatases, GOT, GPT, lipid peroxidases etc. Significant increase/decrease in the activities of all the enzymes studied could be correlated with the histopathological distortion of the liver in the present study during various stages of diclofenac treatment.

Biography

Sushma Sharma has her expertise in Animal Physiology and drug toxicity. She has completed her PhD at the age of 30 years from Himachal Pradesh University, Shimla. She has around 85 publications in various journals to her credit. Presently she is working as Professor in Department of Biosciences, Himachal Pradesh University, Shimla.

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