

92

Hepatic changes induced by Lamivudine in Swiss albino mice



Nidhi Sunhare*, A. Mishra

Institute of Medical Sciences, BHU, Varanasi, Uttar Pradesh, India

Aims and objectives: Lamivudine is a reverse transcriptase inhibitor used in pregnant females infected with hepatitis or HIV virus to prevent maternal to child transmission. The present study was aimed to observe the toxic effects of Lamivudine on liver in growing embryo.

Material and methods: Lamivudine was given to pregnant Swiss Albino mice by oral gavage in doses of 18 mg/kg body weight and 30 mg/kg body weight from 6 to 15th day of gestation. The control mice were fed distilled water by the same route on the same gestational days. The pregnant mice were sacrificed on 18th day of gestation by cervical dislocation and liver were dissected out from the foetuses, observed for any gross malformation and then processed for histological study.

Results: In the treated liver, the sinusoids are ill-formed and degenerated progenitor cells are seen in a dose dependent severity. The hepatocyte population is significantly reduced in a dose dependent manner.

Conclusion: Lamivudine causes toxic changes in foetal liver, thus should be used judiciously in pregnant females.

Conflicts of interest

The authors have none to declare.

<http://dx.doi.org/10.1016/j.jasi.2016.08.100>

93

Micronucleus (MN) assay in oral carcinoma – A diagnostic tool

Kumar Satish Ravi^{1,*}, S. Kaur², S. Reddy³

¹ *Department of AIIMS Rishikesh, India*

² *Lady Harding Medical College, New Delhi, India*

³ *Department of Radiotherapy, JIPMER, Puducherry, India*

Aims and objectives: (i) to explore any existing relationship between nuclear anomalies with dosage and duration of radiotherapy in patients with oral carcinoma, and (ii) possibility of utility of the same obtained relationship in treating patients of oral cancer.

Material and methods: Fifty patients with carcinoma of oral cavity (cheek, gingiva, tongue) were selected from the patients attending either dental or surgery outpatient department of JIPMER Hospital after taking care about the set exclusion criterias i.e. Infective conditions, Carcinoma oropharynx and other oral pathology. Mucosal scrapings were obtained from the site of lesion in the oral cavity and smeared on precleaned slides which are air dried and fixed with methanol (80%). Slides were stained with Geimsa/Maygrunwald stain and slides were observed for the nuclear anomalies under microscope.

Results and conclusion: We have calculated the relative increment in respect of all nuclear abnormalities and the result show

a sustained increase with increasing dosage of radiation at all the levels of RT but after 60 Gray there was a drastic fall in the RI of NB, MNU & KL and a decline was also observed in relation to other nuclear abnormalities.

These parameters can be used as indicators for assessing the response of tumour to radiotherapy. Indices taken at 4 Gy may be used to select the line of treatment. RI showed a sustained increase with increasing dosage of radiation, can be used as prognostic indication in all malignant cases undergoing RT.

Conflicts of interest

The authors have none to declare.

<http://dx.doi.org/10.1016/j.jasi.2016.08.101>

94

Effect of Tocopheryl acetate on cigarette smoke causing oxidative stress to histotoxicity in albino mice



Janardhan Chaudhary*, S.N. Shamal, R. Singh, R.S. More, K. Supriya

Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

Aims and objectives: Cigarette smoke is alkaloid and psychotic complex mixture which was habitat by over one thousand million people worldwide. Cigarette smoke is a complex possessing an array of free radicals mainly; hydroxyl, peroxy, nitric oxide and superoxide radicals which causes oxidant/antioxidant imbalance and elevates oxidative stress. If antioxidant defense mechanisms are too weak, ROS-mediated damage to cellular macromolecules will eventually lead to cell death. Aim of present study is to study whether tocopheryl acetate has effect on cigarette smoke.

Material and Methods: Thirty-six albino mice were randomly assigned into six different groups. 200 mg/kg body weight Tocopheryl acetate was administered through oral gavage and cigarette smoke was exposed to mice for 28 days thrice a day 20 min each time. After cigarette smoke exposure, mice were sacrificed, lung, liver and brain were autopsied for oxidative stress and histological study.

Results: Cigarette smoke exposed group showed significant increased malondialdehyde (MDA) and lowered superoxide dismutase (SOD) and glutathione reductase (GR). On histological observation, it was noted that cigarette smoke exposed group showed significant histopathological findings such as pericellular lacuna, lymph infiltration, carcinomas and neuronal degeneration. On tocopheryl acetate administration, the mice showed positive correction on oxidative stress and histo toxicity.

Conclusion: Tocopheryl acetate can be a protective agent against cigarette smokers in moderate dose to optimize the oxidative stress and from undergoing cell death.

Conflicts of interest

The authors have none to declare.

<http://dx.doi.org/10.1016/j.jasi.2016.08.102>