

14TH ASIA PACIFIC PATHOLOGY CONGRESS

NOVEMBER 13-14, 2017 OSAKA, JAPAN

Gastro-protective potential of melatonin versus melatonin loaded niosomes on gastric ulcer healing in rats**Ebtehal Abdelkhalik Ahmed Mohammed¹, Nasser Anwar², Omyma Galal¹, Mahmoud El-Sabahy¹ and Mokhtar Taha¹**¹Assuit University, Egypt²Al-Azhar University, Egypt

The present study was conducted to investigate the therapeutic effects of melatonin and melatonin-loaded niosomes on ethanol-induced gastric lesions. Morphological and biochemical changes associated with each drug were investigated. 70 apparently healthy female albino rats were randomly assigned to 4 experimental groups. The first group (induction group) included 10 rats that were given 1 ml 70% ethanol and sacrificed after 1 and 1/2 hour. The second group (melatonin-treated group) included 25 rats that were administrated with 2 mg/rat melatonin by gastric tube daily after induction of ulcer by ethanol. Five rats were sacrificed after 3, 7, 14, 21, and 28 days post-treatment. The third group (melatonin-loaded niosomes treated group) consisted of 25 rats that were given melatonin-loaded niosomes in the same dose and route as the third group. Five rats were sacrificed after 3, 7, 14, 21 and 28 days post-treatment. The fourth group is control group. Gross lesions, conventional histological examination as well as biochemical analysis were carried out for each subgroup. Melatonin-loaded niosomes showed early impressive gastro-protection and improved the micro-vascular damages as early as 7 days post-treatment while unloaded melatonin therapy exerted their effects after 14 days, respectively. Biochemically, the cases of melatonin-loaded niosomes achieved the lowest mean values of lipid peroxidation and highest mean values of total antioxidants compared to other values recorded in case of unloaded melatonin therapy and these results are in accordance with that of the histopathological findings.

Biography

Ebtehal Abdelkhalik Ahmed Mohammed has worked as Tutor at Department Animal Pathology and Clinical Pathology, College of Veterinary Medicine, Assiut University in Egypt and has been working as an Assistant Lecturer. He is pursuing PhD at KNU Stem Cell Institute, Kangwon National University, Republic of Korea.

ebtehalabdelkhalik@aun.edu.eg, ebtehalabdelkhalik@ymail.com