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Ultrastructural study of the effect of *Moringa oleifera* Lam on the small intestine of adult rats treated by different doses of diclofenac sodium (voltaren)

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Forty five rats were divided into the following groups (15 each): Group I was served as a control group, Group II was subgrouped to IIa, b and c, that were administered oral 50, 100 and 150 mg/kg of Diclofenac Sodium (DS) respectively for 2 days after fasting for 20 hours. Group III was subgrouped to IIIa, b and c. These rats were maintained on oral *Moringa oleifera* (MO) (500 mg/kg) daily for one week and then they were administered the same doses as in the previous group. Transmission electron microscopy (TEM) showed several alterations in the villous absorptive cell epithelial cells. These changes were mainly separation between two adjacent cells, degeneration and mitochondrial damage. Moreover, plasma cells and eosinophils were observed in the lamina properia. Administration of MO resulted in organization of microvilli, increase in goblet cell numbers with extruding their content into the lumen, abundant mitochondria in the cytoplasm of absorptive cells. It is also noticed that the inflammatory cells appeared tightly contact with the lamina properia. Morphometric analysis showed significant increase in the numbers of goblet cells especially in the groups received voltaren and MO. In conclusion the current study showed that MO leaves might have a partial protective effect on the rat duodenal mucosal histological changes resulted from the administration of high doses of diclofenac sodium in rat.

Biography

Samar Omar Abdullah Bin Rabah completed PhD and currently working as an associate professor in King Abdulaziz University located at Saudi Arabia.

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