Amna Beshir Medani et al., J Pharma Care Health Sys 2016, 3:4(Suppl)
http://dx.doi.org/10.4172/2376-0419.C1.017

Toxic effects of polyDADMAC introduced to Nubian goats in drinking water

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The effects of oral doses of polyDADMAC were daily examined on Nubian goats at two different dose-rates, namely 0.5 mg/kg/day and 2.5mg/kg/day to group-2 and froup-3 goats respectively compared to untreated Nile water given to a group-1 of control goats under experimental conditions. Death occurred to variable levels. In polyDADMAC dosed animals clinical signs included dullness, loss of weight, loss of appetite, diarrhea, difficulty in respiration, and recumbence. Postmortem changes included hemorrhagic and congested lungs, congested livers, inflamed intestines in addition to bloated rumens and their kidneys showed fatty changes oral dosing with polyDADMAC caused lung emphysema, lymphocyte infiltration and edema. Intestines showed congestion and sloughing of intestinal epithelium, their livers manifested generalized fatty change and lymphocyte infiltration and spleens suffered from haemosiderosis, while the control goats showed normal clinical, postmortem and histopathological picture. The serum concentrations of GPT, LDH, CK and GOT showed variable changes ($P<0.01$-0.001). Serum metabolites significantly increased ($P<0.01$-0.001) in urea and creatinine values compared to the control group. Deviated values of electrolytes in serum ($P<0.01$-0.001) from the control values namely, magnesium, iron, sodium, potassium, calcium and phosphorus. Other hematological disorders were manifested mostly by the group of goats received the highest dose. Hepatic and renal dysfunctions, as a sequel to treatment with the under-test polymer, were observed forming a co-related picture which expresses its toxic and sometimes lethal effects.

Biography

Amna Beshir Medani has completed her PhD from University of Khartoum and Postdoctoral studies from University of Khartoum, School of Veterinary Medicine. She is an Associate Professor of Pharmacology and Toxicology at Nile College of Pharmacy, Sudan and is a premier Founder of Toxline.org and Member of many international organizations and bodies. She has published more than 27 papers in reputed journals and conferences and has been serving as an Editorial Board Member of repute.

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