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Nephroprotective effect of Mako (*Solanum nigrum*) and its various fractions in Gentamicin induced nephrotoxicity in rat model

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Chronic renal failure (CRF) is an increasingly common condition worldwide. The prevalence of CRF in India varies from 0.16-0.78%. A large number of chemicals in common use are potential renal toxins. Use of natural compounds for nephroprotective effect is on rise because of their low toxicity and comparatively higher safety. *Solanum nigrum* has been used in Unani system of medicine since time antiquity in ascites, piles, fever gonorrhea, liver diseases and renal diseases. In this study, methanolic extract (ME) of *Solanum nigrum* was studied for its nephroprotective activity against Gentamicin (100 mg/kg), induced acute renal injury in Wistar rats of either sex. In the experimental regimen, the animals were administered with ME (p.o.) at dose levels of 200-800 mg/kg (equivalent to 5-20 gm of the traditional therapeutic crude dose respectively) for 10 days. Gentamicin (100 mg/kg, i.p.) was administered in a single dose from 4th day to 8th day of the experiment. The results showed significant (p<0.01) reduction in the elevated blood urea, serum creatinine, uric acid and also normalized the histopathological changes. However, the results were comparatively better at 800 mg/kg dose level. The findings suggest that the ME possesses marked nephroprotective activity with minimal toxicity and could offer a promising role in the treatment of acute renal injury caused by nephrotoxins like gentamicin. It is a potential plant can be used as nephroprotective agent.

Biography

Mohd Aslam has received his graduate degree (BUMS), Postgraduate degree (MD in Unani) from Hamdard University, New Delhi, India and PhD in Chemistry of Non-Wood Products from Forest Research Institute, Dehradun, India. He has also obtained Postgraduate Diploma in Human Resource Management, Hospital Management and Materials Management from various Indian universities. He has published 52 international and national papers and writer of two books. From the last 18 years, he is engaged in teaching and research. His area of interests is nephroprotective plants and isolation and characterization of new compounds. Presently he is working as an Associate Professor in the School of Unani Medicine, Jamia Hamdard, India.

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