

*Evaluation of the effect of the Solanum nigrum  
fruits in experimentally induced Acute  
pancreatitis in rats*

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**ABSTRACT**

**Objectives:** Evaluation of the effect of the *Solanum nigrum* fruits in experimentally induced Acute pancreatitis in rats.

**Material and methods:** In this model of Pancreatitis, 36 wistar rats of either sex were divided in to 6 groups. Group-1 served as a Normal control which received 0.5% CMC and other group will receive L-arginine ( $2 \times 250\text{mg}/100$  gm body weight, intraperitoneal, 1 h apart). Group-2 served as a Disease control (DC). Where as a group-3 served as a standard group (STD) which received Prednisolone 30mg/kg and group-4, 5, and 6 were a treatment groups that received methanolic extract of *Solanum nigrum* with the dose of 200 mg/kg, 400 mg/kg and 600 mg/kg respectively. After the experimental period blood sample were collected for serum parameter (Amylase, Lipase, Nitric oxide and C-reactive

protein). Moreover, Pancreas was isolated for biochemical parameters (Superoxide dismutase, Lipid peroxidase and Myeloperoxidase) and histopathological studies.

**Results:** L-arginine treatment caused Pancreatitis as evidenced by marked elevation in Blood amylase, lipase. Co-administration of herbal extract decreased rise in Blood amylase & lipase level. Apart from these Histopathological changes also showed curative nature of herbal extract against L-arginine induced pancreatic damage.

**Conclusion:** It was observed that herbal extract of *Solanum nigrum* fruits has the potential to combat acute pancreatitis by acting as an anti-inflammatory and antioxidant agent by histopathological, serum and biochemical observation against L-arginine induced pancreatitis in rats.

Key words: Acute pancreatitis; L-arginine; Cytokines; Lipid peroxidation; methanolic extract; Anti oxidant