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Effect of ethanolic extract of coconut (*Cocos nucifera*) on aspirin-induced gastric ulcer in albino rats

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Statement of problem: The integrity of stomach mucosa is maintained by defense mechanism e.g. mucous secretion, mucosal blood flow, bicarbonate secretion, scavenging of free radicals and gastric mucosal barrier against these damaging and aggressive factors. The peptic ulcer developed when the balance between aggressive and defensive factors occurs and situation favors aggressive factors enough to cause mucosal damage and lead to ulceration. Aspirin is extensively used as an analgesic and anti-inflammatory drug. It is safe in therapeutic doses but it is toxic in over dosage or in chronic injudicious use, when it causes acute or chronic toxicity respectively. Acute toxicity causes gastric ulceration and bleeding. Many antioxidants have been trying to study their protective effects of NSAIDS induced gastric ulcers. Coconut and its products are known for their antioxidant, antibacterial, antidiabetic, antithrombotic and antiulcerogenic effects. Present study was designed to observe the effect of ethanolic extract of coconut on aspirin induced gastric ulcer in male albino rats. Two different studies are documented about the effect of ethanolic extract of coconut on Indomethacin induced gastric ulcers. Both are paradoxical and show controversy at different doses of extract. The present study, therefore, designed in an attempt to observe the effects of high doses of ethanolic extract of coconut on aspirin induced gastric ulcers. This study was conducted at University of Health Sciences Lahore.

Methods: Thirty (30) rats, weighing 175-220gm, were divided into six groups and treated with different doses of Ethanolic extract of coconut for 14 days and was sacrificed on 15th day of experiment. Methodology involved staining of stomach with H&E and Masson Trichome staining and observed for desquamation, mucosal congestion, inflammatory cells and necrosis. Blood samples were drawn for serum analysis of Super Oxide Dismutase (SOD).

Findings: The results showed that ethanolic extract of coconut helps to heal the stomach ulcers and gives best results at 400mg/kg dose and also helps to reduce oxidative stress which also helps to heal ulcers.

Conclusion & Significance: It was concluded that ethanol extract of coconut provides a very reliable and cost effective adjunctive therapy to be routinely used in patients who take aspirin and aspirin induced gastric ulcers as well.

Biography

Madiha Amjad is a Doctor and obtained MBBS degree from Dalian Medical University, China in 2010. He then worked as House Officer in Medicine and Surgery from 2011-2012. He worked as a Demonstrator of Anatomy for one year and started Post-graduation in Anatomy in 2014 from UHS, Lahore, Pakistan. He is also pursuing MHPE (Master's in Health Professional Education) from UHS. His research interests are gastrointestinal pathologies, female genital tract pathologies, breast cancer and autoimmune diseases.

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