

AMELIORATION OF RENAL INFLAMMATION, OXIDATIVE STRESS AND NECROSIS UNDERLIES THE PROTECTIVE EFFECT OF UNOPENED COCONUT INFLORESCENCE SAP POWDER IN GENTAMICIN-INDUCED NEPHROTOXICITY

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Fresh oyster white translucent sap obtained from the tender unopened inflorescence of coconut trees (*Cocos nucifera*) is identified to have great health benefits. Drug induced nephrotoxicity is one of the major causes of renal damage in present generation. As a therapeutic agent, gentamicin imparts direct toxicity to kidney, resulting in acute tubular necrosis, glomerular and tubulointerstitial injury, haemodynamically mediated damage and obstructive nephropathy. There exists an increasing demand for safe and natural agents for the treatment and/or prevention of chronic nephrotoxicity and pathogenesis of kidney diseases. Our study shows the nephro protective/curing effect of a novel powder formulation of micronutrient enriched, unfermented coconut flower sap (CSP). The study was performed on adult male Wistar rats. The animals were grouped into three and treated separately with vehicle, gentamicin and gentamicin+CSP for 16 days. Initially, gentamicin treatment significantly ($p < 0.05$) reduced the levels of antioxidant enzymes (SOD, CAT, GPx) and GSH and increased ($p < 0.05$) the levels of creatinine, uric acid, urea, inflammatory markers (nitrite, IL-6, TNF- α , iNOS) and lipid peroxidation. Supplementation of coconut flower sap powder showed significant ($p < 0.05$) reversal of all these biochemical parameters indicating an effective inhibition of the pathogenesis of nephrotoxicity and kidney disease

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