

Coconut water vinegar ameliorates recovery of acetaminophen induced liver damage in mice

ABSTRACT

Background: Coconut water has been commonly consumed as a beverage for its multiple health benefits while vinegar has been used as common seasoning and a traditional Chinese medicine. The present study investigates the potential of coconut water vinegar in promoting recovery on acetaminophen induced liver damage.

Methods: Mice were injected with 250 mg/kg body weight acetaminophen for 7 days and were treated with distilled water (untreated), Silybin (positive control) and coconut water vinegar (0.08 mL/kg and 2 mL/kg body weight). Level of oxidation stress and inflammation among treated and untreated mice were compared.

Results: Untreated mice oral administrated with acetaminophen were observed with elevation of serum liver profiles, liver histological changes, high level of cytochrome P450 2E1, reduced level of liver antioxidant and increased level of inflammatory related markers indicating liver damage. On the other hand, acetaminophen challenged mice treated with 14 days of coconut water vinegar were recorded with reduction of serum liver profiles, improved liver histology, restored liver antioxidant, reduction of liver inflammation and decreased level of liver cytochrome P450 2E1 in dosage dependent level.

Conclusion: Coconut water vinegar has helped to attenuate acetaminophen-induced liver damage by restoring antioxidant activity and suppression of inflammation.

Keyword: Cocos nucifera; Paracetamol; Phenolic; Acetification; Inflammation