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#### **ABSTRACT 204**

#### **PROTECTIVE EFFECT OF *ORTHOSIPHON STAMINEUS* EXTRACT AGAINST ACETAMINOPHEN-INDUCED HEPATOTOXICITY AND NEPHROTOXICITY IN RATS**

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#### **BACKGROUND**

*Orthosiphon stamineus* (OS) is known locally as 'Misai Kucing'. Many studies demonstrated that this herb protects liver and kidney. These effects may be attributable to its antioxidant and free radical scavenging properties.

#### **OBJECTIVE**

The main objective of the study was to evaluate the effectiveness of OS as hepatoprotective and nephroprotective agents in APAP-induced toxicity.

#### **METHODS**

Thirty Wistar rats were divided into 5 experimental groups with 6 rats each. Group 1 received 3ml of distilled water daily. Group 2, 3, and 4 were pre-treated with 1000mg/kg, 500mg/kg and 250mg/kg of OS respectively. Group 5 was neither given SEOS nor APAP and served as control group. These groups were treated for a week. On day seven, 1000mg/kg APAP was administered orally to all groups except the control. Twenty four hours after later, animals were sacrificed and blood was collected for aspartate aminotransferase, alanine aminotransferase, urea and creatinine level. Liver and kidney tissues were collected for histopathological analysis.

#### **RESULTS**

There were significant reductions of median AST and ALT levels of treatment groups compared to control groups. There were similar effects on median AST and ALT levels regardless of different doses of SEOS. Pre-treatment of SEOS significantly reduced vacuolar degeneration, centrilobular necrosis and portal inflammation in liver. A toxic dose of 1000mg/kg of acetaminophen was unsuccessful to induce nephrotoxic effects in young male Wistar rats.

#### **CONCLUSION**

OS had hepatoprotective effect evidenced by inhibition of serum AST and ALT elevation post APAP-induced hepatotoxicity together with reduction in necrotic changes.