Effects of two medicinal plant extracts on paracetamol poisoning: A comparison of reduced glutathione level and liver histopathology.

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Abstract Book

OP-7: Prolonged versus standard regime of steroid in the management of frequent relapsing nephrotic syndrome in childhood

UK Jayantha
Department of Paediatrics, University of Ruhuna, Galle

Introduction: There is no agreement on the duration of steroid therapy in the management of nephrotic syndrome.
Objectives: To determine the benefits of prolonged steroid regime against the standard regime in patients with frequently relapsing nephrotic syndrome.
Method: Patients who have shown frequent relapses (>3/year) during the preceding year were included.
Patients were randomly allocated to standard regime (prednisolone 60mg/m^2/day until remission followed by 40mg/EOD/28days) and prolonged steroid regime (prednisolone 60mg/m^2/day until remission followed by 60mg/m^2/EOD for 28 days). Then the dose of steroid was reduced monthly by 10mg/m^2 until 10mg/m^2/EOD.
Results: Standard regime - Number of patients 24, Mean age of onset 46 months (SD 20.2), Mean duration of remission 43 months (SD 22.4). Prolonged regime - Number of patients 24, Mean age of onset 48 (SD 3.38), Mean duration of remission 15.1 months (SD 2.24)
Relapse rate by completion of 6 months, 12 months and 24 months were 83% (20/24), 95% (19/20) and 100% (10/10) respectively in the standard regime treated group. Corresponding values in the prolonged regime were 4% (1/25), 35% (8/23) and 55% (11/20) respectively in the prolonged steroid regime treated group. Relapse rate /pt/yr in the standard group 2.8 (SD 1.1) in the prolonged regime group 0.4 (SD 0.3) ($P<0.001$).
Conclusions: Frequently relapsing nephrotic syndrome should be treated with a prolong course of steroid before considering steroid sparing agents such as cyclophosphamide.

OP-8: Effects of two medicinal plant extracts on paracetamol poisoning: A comparison of reduced glutathione level and liver histopathology

*RP Hewawasam, KAPW Jayatilaka, C Pathirana, LKB Mudduwa**
Department of Biochemistry, Department of Pathology, Faculty of Medicine, University of Ruhuna, Karapitiya, Galle*

Background: Paracetamol (acetaminophen) is known to cause hepatic necrosis in overdose. It is thought to be mediated via the P450-generated reactive intermediate N-acetyl p-benzo quinone imine (NAPQI). The therapeutic application of two medicinal plants, *Asteracantha longifolia* and *Vetiveria zizanioides* as antidotes to paracetamol overdose was examined in ICR mice.
Methods: Hepatotoxicity was induced by a single oral dose of acetaminophen (300 mg/ kg). Aqueous extracts of the plants were used on a pre and post-treatment basis. N-acetyl cysteine (500 mg/ kg) was given as a positive control. Animals were sacrificed 4 h after the administration of paracetamol and liver tissue was collected for the analysis of liver reduced glutathione level (GSH) and histopathology. Sections were independently evaluated without prior knowledge of treatment regimen and the liver reduced glutathione level was also analysed independently.
Results: A significant decrease in the liver GSH occurred within 4 h of exposure to paracetamol. Both plant extracts increased the liver GSH level significantly ($P<0.001$) compared to the paracetamol control group. Histopathological examination also provided supportive evidence for the biochemical analysis. Histologically, liver tissue from the paracetamol control group showed confluent necrosis with vacuolation, ballooning degeneration and massive congestion in the surviving parenchyma. *Asteracantha* showed a marked improvement in the liver histopathology compared to *Vetiveria* treated mice.
Conclusions: Both *Asteracantha* and *Vetiveria* can be considered as effective hepatoprotective agents against paracetamol induced hepatocellular injury in mice.