URINARY/KIDNEY DISORDERS - Clinical Outcomes Studies

PUIK DIURETIC ACTIVITY OF AQUEOUS EXTRACT OF BOSWELLIA SERRATA ROXB. OLEO GUM IN NORMAL ALBINO RATS

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OBJECTIVES: To evaluate the diuretic effect of aqueous extract of Boswellia serrata Roxb oleo gum on urinary electrolytes, pH and diuresis in normal albino rats.

METHODS: Oleo gum weighing 500g was soaked in hot boiling water (1L) at room temperature for 3 days with occasional shaking. Filtrate was evaporated on rotary evaporator under reduced pressure (~760 mmHg) to a thick, semi-solid pasty mass of dark brown color. The resulting solid was completely solubilized in distilled water and saline for in-vitro and in-vivo experimentation. Phytochemical analysis was carried out for alkaloids, saponins, anthraquinones, flavonoids and tannins. For in-vivo activity, five groups of with six animals in each were administered normal saline (10ml/kg, p.o.), Furosemide (10mg/kg) and crude extracts of Boswellia serrata (10, 30 and 50mg/kg of body weight), respectively. Toxicological effect of plant was undertaken in rats at a dose of 3000mg/kg. Data was presented as mean ± SEM and analyzed using Graph Pad Prism (Graph Pad, San Diego, USA). Student t-test was applied for data analysis.

RESULTS: All doses of the extract significantly increased urinary electrolytes excretion in a dose-dependent manner. Diuretic index of test groups were 1.36, 2.06 and 2.60, respectively while, Liphsitz value also showed significant diuretic activity in dose-dependent manner. Urinary pH remained unchanged during the course of the study whereas, no lethality was observed at the dose of 3000mg/kg.

CONCLUSIONS: Aqueous Boswellia serrata oleo gum extracts administered particulars at the dose of 50mg/kg significantly induced water and electrolytes with no signs of toxicity.

PUIK TOTAL ECONOMIC BURDEN OF BOTH PERITONEAL DIALYSIS AND RENAL ANEMIA TREATMENT

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OBJECTIVES: To estimate the total economic burden of both peritoneal dialysis and renal anemia treatment in China.

METHODS: Eight medical centers with regular follow-up system for peritoneal dialysis patients in 6 provinces were selected for prospective observation research. Inclusion and exclusion criteria were set down before the study through the discussion with clinical experts. Patients had been recruited in the study since July of 2011. Patient baseline characteristics, treatment and expenditure for both outpatient and inpatient during 3-months follow-up duration were recorded. Direct medical costs included fee for registration and services, medical examination, drugs and medical consumable materials. Direct non-medical costs included transportation fee and nursing fee. Off-work days were collected to estimate indirect costs.

RESULTS: A total of 149 patients with records of 703 outpatient visits and 19 inpatient stays were collected. Mean age of patients is 50.1 years and approximately 3.7 years of peritoneal dialysis treatment at the time of the EPO treatment. The average frequency was 1.41 visits in medical centers per month and 1.23 visits in community health centers. The average cost of EPO was CNY1,518 ($US241) per month with average dosage of 1644IU. Total economic burden per peritoneal dialysis patient was CNY8,756 ($US1,354), including CNY9,163 ($US1,454) for direct medical costs, CNY210 ($US33) for indirect medical costs and CNY383 ($US61) for indirect costs. The share of total economic burden related to GDP per capita ranged from 1.3 times to 6.4 times in 6 sampling provinces.

CONCLUSIONS: The total economic burden of both peritoneal dialysis and renal anemia treatment seems relatively high, which needs more attention from the government and society.

PUIK3 CLINICAL AND ECONOMIC IMPACTS OF CLINICAL PHARMACY EDUCATION ON INFECTION MANAGEMENT AMONG PATIENTS WITH CHRONIC KIDNEY DISEASE IN A HOSPITAL (INDONESIA)

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OBJECTIVES: This study evaluated the clinical and economic impacts of clinical pharmacy education (CPE) on infection management among patients with chronic kidney disease (CKD) stage 4 and 5 in Haji Adam Malik (HAM) hospital, Indonesia.

METHODS: A quasi-experimental education evaluation comparing CPE impact on six months intervention based on pre and post intervention (N=63) experimental group (n=36) received care by health care providers that were given CPE on DRPs and dose adjustment. The control group (n=80) was based on the historical cohort of patients that received care before the CPE. Measure of clinical outcome applied in the study was number of lives saved/100 patients treated. Cost-effectiveness (CE) ratio for stages 4 and 5 CKD patients without CPE and with CPE, incremental cost effectiveness ratio (ICERs) for stage 4 and 5 CKD patients were analyzed.

RESULTS: Lives saved (%) in the treatment of CKD without CPE. CKD stage 4, 78.57; CKD stage 5, 57.58. Lives saved (%) in the treatment of CKD with CPE. CKD stage 4, 88.89; CKD stage 5, 65.45. Cost-effectiveness ratios for stage 4 without and with CPEs were Rp3,593,295.97 and Rp3,487,733.27, respectively. Cost-effectiveness...