J Nephrol Ther 2016, 6:5(Suppl)
http://dx.doi.org/10.4172/2161-0959.C1.031

Drug dosage adjustment in hospitalized patients with renal impairment at Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia

Henok Getachew, Yewondwossen Tadesse and Workineh Shibeshi
University of Gondar, Ethiopia

Background: Dose adjustment for certain drugs is required in patients with reduced renal function to avoid toxicity as many drugs are eliminated by the kidneys. The aim of this study was to assess whether appropriate dosage adjustments were made in hospitalized patients with renal impairment.

Methods: A prospective cross-sectional study was carried out in the internal medicine wards of Tikur Anbessa Specialized Hospital. All patients with creatinine clearance ≤59 ml/min admitted to hospital between April and July, 2013 were included in the analysis. Data regarding serum creatinine level, age, sex and prescribed drugs and their dosage was collected from the patients' medical records. Serum creatinine level ≥1.2 mg/dL was used as a cutoff point in pre-selection of patients. The estimated creatinine clearance was calculated using the Cockcroft-Gault (CG) equation. Guideline for drug prescribing in renal failure provided by the American College of Physicians was used as the standard for dose adjustment.

Results: 9% (73/810) of medical admissions were found to have renal impairment (CrCl≤59 ml/min). There were 372 prescription entries for 73 patients with renal impairment. Dose adjustment was required in 31% (115/372) of prescription entries and 58 (51%) prescription entries requiring dose adjustment were found to be inappropriate. Of 73 patients, 54 patient received ≥1 drug that required dose adjustment (median 2; range 1–6). 15 (28%) patients had all of their drugs appropriately adjusted while 22 (41%) patients had some drugs appropriately adjusted, and 17 (31%) of patients had no drugs appropriately adjusted. No patients were documented to have received dialysis.

Conclusion: The findings indicate that dosing errors were common among hospitalized patients with renal impairment. Improving the quality of drug prescription in patients with renal impairment could be of importance for improving the quality of care.

heniget@gmail.com

A model of improved acute antibody mediated rejection in murine renal transplantation

Zhao Da-qiang, Li Si-wen, Liao Tao, Huang Zheng-yu, Han Fei, Hua Xue-feng, Li Heng and **Sun Qi-quan**
Third Affiliated Hospital of Sun Yat-sen University, China

6-8 weeks old male C3H and Balb/c mice were used as skin or kidney graft donors and recipients. Donor specific antibody (DSA) levels of recepient serum were monitored within 100 days post skin presensitization. Recipient animals were divided into three groups: The ever reported method group (ST-7dTx) and improved method groups (ST-4dTx, ST-3dTx). Recipient animals were presensitized by transplanting skin grafts before seven, four and three days of kidney transplantation in ST-7dTx, ST-4dTx and ST-3dTx groups. Animal survival time was recorded. The diagnosis of renal antibody mediated rejection (AMR) was evaluated based on Banff 2013 criteria. DSA-IgG level continously elevated within 50 days after presensitized by skin transplantation and kept a plateau within 50-100 days. DSA-IgM level did not incease remarkably within 100 days post skin presensitization. The median survival time of ST-7dTx, ST-4dTx, and ST-3dTx groups were four, seven and nine days. All recepient animals in ST-7dTx and ST-4dTx groups died within 14 days post kidney transplantation. 17% recepients in ST-3dTx acquired long-term survival (>60d). The dominant death reason for all animals was acute AMR of renal grafts, which met Banff 2013 criteria. Recepient animals in improved models survived and allowed longer time for intervening AMR. So, the improved model is superior to the ever reported one. Some recepient animals in ST-3dTx group can survive, which may interfer the observation results when applying the model to evaluating the effects of therapeutic strategies for renal graft AMR, so ST-4d Tx is a more idea murine acute AMR kidney transplantation model.

zhaodaq@mail.sysu.edu.cn