

Impact of Clinical Pharmacist Intervention in Improving Drug Related Problems in Patients with Chronic Kidney Disease

Authors : Aneena Suresh, C. S. Sidharth

Abstract : Drug related problems (DRPs) are common in chronic kidney disease (CKD) patients and end stage patients undergoing hemodialysis. To treat the co-morbid conditions of the patients, more complex therapeutic regimen is required, and it leads to development of DRPs. So, this calls for frequent monitoring of the patients. Due to the busy work schedules, physicians are unable to deliver optimal care to these patients. Addition of a clinical pharmacist in the team will improve the standard of care offered to CKD patients by minimizing DRPs. In India, the role of clinical pharmacists in the improving the health outcomes in CKD patients is poorly recognized. Therefore, this study is conducted to put an insight on the role of clinical pharmacist in improving Drug Related Problems in patients with chronic kidney disease, thereby helping them to achieve desired therapeutic outcomes in the patients. A prospective interventional study was conducted for a year in a 620 bedded tertiary care hospital in India. Data was collected using an unstructured questionnaire, medication charts, etc. DRPs were categorized using Hepler and Strand classification. Relationships between the age, weight, GFR, average no of medication taken, average no of comorbidities, and average length of hospital days with the DRPs were identified using Mann Whitney U test. The study population primarily constituted of patients above the age of 50 years with a mean age of 59.91 ± 13.59 . Our study showed that 25% of the population presented with DRPs. On an average, CKD patients are prescribed at least 8 medications for the treatment in our study. This explains the high incidence of drug interactions in patients suffering from CKD (45.65%). The least common DRPs in our study were found to be sub therapeutic dose (2%) and adverse drug reactions (2%). Out of this, 60 % of the DRPs were addressed successfully. In our study, there is an association between the DRPs with the average number of medications prescribed, the average number of comorbidities, and the length of the hospital days with p value of 0.022, 0.004, and 0.000, respectively. In the current study, 86% of the proposed interventions were accepted, and 41 % were implemented by the physician, and only 14% were rejected. Hence, it is evident that clinical pharmacist interventions will contribute significantly to diminish the DRPs in CKD patients, thereby decreasing the economic burden of healthcare costs and improving patient's quality of life.

Keywords : chronic kidney disease, clinical pharmacist, drug related problem, intervention

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