Abstrakt práce v anglickém jazyce

Title: Analysis of drug problems at hospital department from the pharmacist's point of view

Introduction: Chronic kidney disease is a medical and economic problem. It affects 10–13 % of the population in European countries and incidence is increasing with every decade of life. The most common cause of kidney failure in patients over 50 years of age is associated with 2. type diabetes and hypertension. Chronic kidney disease is associated with risk of mortality, hospitalization and decreased quality of life.

Clinical pharmacist as a specialist in a field of pharmacotherapy collaborates with other health professionals to optimize pharmacotherapy. Proactive approach with active prevention of drug related problems (DRPs) is preferre. Identification and minimization of drug problems together with optimization of pharmacotherapy are the main objectives of clinical pharmacy. Where the prerequisite for the detection and resolution of drug problems is not only knowledge of pharmacology but also other medical disciplines such as biochemistry, microbiology, pathophysiology and epidemiology.

This work is one of the first publications of this type in the Czech Republic, which reveals a review of pharmacotherapy in patients with chronic kidney disease and the integration of a pharmacist into a multidisciplinary team

Aim: To provide the most comprehensive picture of DRPs in patients with chronic kidney disease and to show the practical integration of a clinical pharmacist into a multidisciplinary team caring for nephrological patients not only in the area of DRPs identification and solution but also by therapeutic drug monitoring. We focused on therapeutic monitoring of aminoglycosides and vancomycin. We verify the validity of hypotheses that therapeutic monitoring of aminoglycosides is a cost-effective and to achieve vancomycin target concentrations in dialysis patients, it is essential to give an adequate loading dose.

Methodology: Prospective clinical analysis at the hospital department, based on theoretical assumptions about DRPs from published studies. The following tools were used: PCNE V6.2 (Pharmaceutical Care Network Europe Foundation) was used to break down the DRPs, for therapeutic drug monitoring - MwPharm® 4.0 pharmacokinetic program, SPSS® Statistics 20 for Windows statistical data processing.

Results: The pharmacist evaluated the medication in 1850 hospitalized patients with 1192 DRPs. The most common drug problem identified in our patient population was the untreated

indication. It accounted for 27.18% of cases (324 DRPs) of the total number of reported drug problems. The second largest group of problems was incorrect dose selection - too low a dose, which accounted for 20.81% of cases (248 DRPs). The leading cause of DRPs was drug selection 56.80% (N = 677). Therapeutic monitoring of aminoglycosides was performed in 52 patients. There was no evidence of nephrotoxicity in any patient. The most common problem was underdose. From the data of 44 dialysis patients, a formula for calculating the loading dose of vancomycin was derived. When calculating the initial dose of vancomycin at the start of therapy, the patient's weight and age should be taken into account. Control of the measured concentration of vancomycin is also influenced by the time of concentration concentration.

Conclusion: This work is one of the first publications of this type in the Czech Republic, which reveals a review of pharmacotherapy in patients with chronic kidney disease and the integration of a pharmacist into a multidisciplinary team. Pharmacotherapeutic monitoring should be a common part of clinical practice in patients with polypharmacotherapy and with drugs with narrow therapeutic index.