

# Abstract

## Adherence to Treatment in Patients after Kidney Transplantation

**Author:** Barbora Vaňková

**Tutor:** PharmDr. Josef Malý, Ph.D.

**Consultant:** PharmDr. Kateřina Láďová, Ph.D.

Department of Social and Clinical Pharmacy, Faculty of Pharmacy in Hradec Králové, Charles University

**Introduction and aims:** Kidney transplantation (KT) is the best treatment option for patients with end-stage renal disease. However, despite its numerous benefits it requires a lifelong medical regimen of immunosuppressive treatment (IS) with a special emphasis on a strict medication adherence (MA). The objective of our study was to analyse MA in KT outpatients. We also intended to analyse non-adherence as one of the drug-related problems. Furthermore, we focused on analysis of the main self-management tasks.

**Methods:** The prospective cross-sectional study was undertaken in one year period from March 2016 to March 2017 at the Haemodialysis Centre in the Teaching Hospital Hradec Králové. Patients  $\geq 18$  years old and at least 3 weeks after KT were addressed within their regularly scheduled visit to the nephrologist. Structured interview was performed by pharmacist to determine patients' self-reported MA to IS using validated Czech version of Medication Adherence Report Scale (MARS-CZ). In addition, patients were interviewed about other self-management issues including recommended dietary habits, approach to sun protection, blood pressure self-monitoring or smoking. Simultaneously, medication records were reviewed. Data analysis was performed by means of descriptive statistics.

**Results:** A total of 211 patients with the mean age of  $55.8 \pm 12.41$  years completed the interview. Patients were  $7.4 \pm 5.75$  years after KT and used in average  $11.3 \pm 2.96$  drugs. The mean score of MARS-CZ was  $24.7 \pm 0.74$  (MIN 16; MAX 25). Using the cutpoint of  $< 23$ , signs of non-adherence to IS were observed in 6 patients. In terms of medication taking, Tacrolimus on empty stomach was taken by 44 (35.2%) patients and Prednisone after the breakfast by 160 (79.6%) patients. A number of 174 (82.5%) patients followed their dietary recommendations. Out of 211, 153 (72.5%) patients used some kind of sun protection, 172 (81.5%) measured blood pressure at home and 24 (11.4%) were regular smokers.

**Conclusions:** We detected few cases of possible non-adherence. However, lower acceptance of other self-management tasks may also cause serious problems. Knowledge about the medication-taking behaviour was insufficient, especially in Tacrolimus and Prednisone. Level of a sun protection was unsatisfactory. Interventions on multiple levels including education and psychosocial support should be implemented to daily routine to minimize the risks of therapy failure. In our opinion, the engagement of the pharmacist could enhance patients' knowledge about the treatment. They could also motivate them and reduce their concerns.

**Key words:** medication adherence, kidney transplantation, intervention of a pharmacist.