

Title: REAL CLINICAL IMPACT OF DRUG-DRUG INTERACTIONS OF IMMUNOSUPPRESSANTS IN TRANSPLANT PATIENTS

ANA ISABEL GAGO¹, PILAR FONT¹, MANUEL CÁRDENAS¹, Dolores Aumente¹, JOSE RAMÓN DEL PRADO¹, and Miguel Ángel Calleja Hernández²

¹Hospital Universitario Reina Sofia

²Hospital Universitario Virgen Macarena

May 22, 2021

Abstract

Aim: The main objective of this study was to determine the prevalence of real DDIs between immunosuppressants and other drugs in transplant patients. **Methods:** We conducted a prospective, observational 1-year study at a tertiary hospital, including all transplanted patients. We evaluated data from monitoring blood concentrations of immunosuppressive drugs and adverse drug events (ADEs) caused by DDIs. The DDIs were classified as C, D, or X according to their Lexi-Interact rating (C = monitor therapy, D = consider therapy modification, X = avoid combination). The clinical importance of real DDIs was expressed in terms of patient outcomes. The data were analyzed using Statistical Package for Social Sciences (SPSS) package v. 25.0 (IBM Corp., Armonk, NY, USA). **Results:** A total of 309 transplant patients were included. Their mean age was 52.0 ± 14.7 years (18–79) and 69.9% were male. The prevalence of real DDIs was 21.7%. Immunosuppressive drugs administered with anti-fungal azoles and tacrolimus (TAC) with nifedipine have a great clinical impact. Real DDIs caused ADEs in 22 patients. The most common clinical outcome was nephrotoxicity (1.6%; n=5), followed by hypertension (1.3%; n=4). Suggestions for avoiding category D and X DDIs included: changing the immunosuppressant dosage, using paracetamol instead of non-steroidal anti-inflammatory drugs, and interrupting atorvastatin. The number of drugs prescribed and having been prescribed TAC was associated with an increased risk of real DDIs. **Conclusion:** There are many potential DDIs described in the literature but only a small percentage proved to be real DDIs, based on the patients' outcomes.

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