CLINICALLY SIGNIFICANT DRUG INTERACTIONS OF ELTROMBOPAG: A RETROSPECTIVE STUDY FROM THE CLINICAL PHARMACIST PERSPECTIVE

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Introduction: Thrombopoietin is the main cytokine regulating megakaryopoiesis and platelet production. Eltrombopag interacts with the transmembrane domain of thrombopoietin receptors and initiates signaling cascades inducing proliferation and differentiation from bone marrow progenitor cells. The aim of the study was to determine drug interaction at patients that are receiving Eltrombopag along with other medications.

Materials and methods: A retrospective, longitudinal study was conducted at the Hematology Clinic in Skopje, N. Macedonia. A clinical pharmacist, focusing on Eltrombopag and concomitant medications interactions, reviewed a total number of 16 patient's histories for the period of 6 months (January-June 2023). Anamnestic data on additional drugs, herbal supplements, vitamins, minerals were also taken. Potential drug interactions were identified using Stockley's interactions checker, categorized by severity and subclassified into co-administered drugs altering pharmacokinetics.

Results: A total number of 73 interactions were identified, of which 23 (31.51%) were with moderate clinical relevance, 14 (19.18%) were with no clinical importance and required counseling about possible adverse effects and additional monitoring. The rest of 36 (49,32%) interactions were without clinical significance. Additionally, we determine that 7 (9.59%) of total interactions directly related to patients receiving Eltrombopag (ciclosporin, atorvastatin, rosuvastatin, dexamethasone, prednisolone, valsartan, and magnesium) and categorized as moderate and needs close monitoring.

Conclusion: This study demonstrates toxicity potential of Eltrombopag at patients associated with concomitant medicines. Close collaboration of physicians and clinical pharmacists is necessary in all cases where patients are receiving Eltrombopag along with other medications in order all significant interactions to be identified, prevented and managed.