The objective of this study is to analyse the drug interactions in hematopoietic stem cell transplant (HSCT) recipients receiving azole antifungal drugs (voriconazole and fluconazole) and investigate the impact of such interactions.

A retrospective study was performed on 1067 daily drug prescriptions of 38 patients (61% men and 39% women) treated with hematopoietic stem cells who were hospitalized during 2012 in the haematology and transplants service.

The average number of drugs per prescription was 5 drugs, with a minimum of 3 and a maximum of 17.

The majority of interactions were classed as precautions for use (3rd level of risk):
- Voriconazole: ciclosporin, nicardipine and sodium alginate
- Fluconazole: ciclosporin, acenocoumarol and sodium alginate

We assessed the effects of azole antifungals administration on the concentration of calcineurin inhibitors, namely ciclosporin, in the recipients of hematopoietic stem cell transplants and revealed a notably wide inter-individual variability in the magnitude of the drug interaction.

Polypharmacy in patients treated with hematopoietic stem cells requires a certain level of vigilance to prevent the adverse effects and the occurrence of iatrogenic events.

Understanding the mechanisms of drug interactions allows clinicians to avoid certain interactions and to develop a possible strategy to minimise iatrogenic events. This is facilitated by the establishment of a computerised system in the service to prevent iatrogenic drug and ensure patient safety.