



# DRUG INTERACTION BETWEEN NOACs AND ITRACONAZOLE: AN ITALIAN DISTRICT ANALYSIS

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## BACKGROUND:

New Oral Anticoagulant Drugs (NOACs) are glycoprotein-P (gp-P) substrate and principally they are metabolized by CYP3A4. It's not recommended NOACs administration with antibiotics because they are powerful CYP3A4 and gp-P inhibitors; consequently, the exposure to the active substance increases the risk of bleeding.

## OBJECTIVE:

Search patients with concomitant NOACs and antifungal therapies, examining general practitioners prescriptions.

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## METHODS:

Prescriptions from an Italian district about 2017, in charge of Italian national health system, are being analysed. The molecules considered are NOACs: Apixaban, Edoxaban, Rivaroxaban, Dabigatran and the antifungal Itraconazole. Data have been extracted from a database called S2i-italia and they have been elaborated with Access.

## RESULTS:

In 2017, 7404 patients have been treated with NOACs and 2580 with Itraconazole. 13 patients have concurrent prescriptions of NOACs and Itraconazole (0,18% of all patients with NOACs prescriptions), they have a medium age of 72 years old, in a range from 43 to 83 years old. The age  $\geq 75$  years old is a risk factor because NOACs metabolism is slowed down and it's possible that it increases more plasma concentration.

The NOACs molecules prescribed in concurrently with Itraconazole are: Apixaban for five patients, Dabigatran for four, Rivaroxaban for three and Edoxaban for one.

The average number of NOACs packs delivered to a patient is 5,5 (72 in total), the exception is about the case of two patients 76 years older with 14 and 24 packs prescribed concurrently with acetylsalicylic acid for the whole analysed year, although they should have been avoided in this case of increased hemorrhagic risk.

## CONCLUSIONS:

In 2017, 1,72% of examined patients has NOACs and/or Itraconazole prescriptions, but only 0,18% of them has concurrent therapies, even if it's contraindicated cause of the increase of bleeding risk. The advanced average age which causes the metabolism slowing, the frequent polypharmacy with the possibility of drug interaction increase the bleeding risk. It's appropriate to focus on each case and evaluate dose reduction and make a therapeutic reconciliation, especially in elder patients in polytherapy.