5PSQ-014 NOVEL ORAL ANTICOAGULANTS VS VITAMIN K ANTAGONISTS: A COST ANALYSIS

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Background In elderly patients, anticoagulants are the most commonly implicated medication in emergency department (ED) visits due to an adverse drug event (ADE): 17.6% of all ADE requiring the ED are linked to oral anticoagulant: 50% of them require hospital admission.

Purpose The aim of the study was to assess whether the main reason for hospitalisation is related to ADE of NOACs: to evaluate the potential exposure to drug-drug interactions/assess whether contraindicated drugs have been prescribed in association with NOACs; and evaluate the economic impact associated with NOACs therapy.

Material and methods Data from 2016–2017 were retrieved from administrative and health databases: the File C2 registry which groups all patients admitted to the ED filtered using identified ICD-9-CM codes (International Classification of Diseases) related to ADE possibly induced by anticoagulants; the File F registry, from local health units to identify anticoagulant therapy; and the hospital discharge form (SDO) which stores clinical information about patients. File C2, File F and SDO were matched to estimate costs incurred by the healthcare system: Diagnosis Related Group (DRG) codes were analysed to evaluate the cost/patient.

Results Data of 1867 patients were extrapolated from File C2, matched with File F, through ICD9-CM related to ADE from anticoagulants: 43 patients were selected (median age=80 (σ=12), male:76%). The most frequent diagnoses were: subdural haemorrhage (31%), iron deficiency anaemia and chronic blood loss (22%), subarachnoid haemorrhage (9%) due to Warfarin (75.5%), Dabigatran (8.9%), Rivaroxaban (8.9%).

Crossing File C2 and SDO, 62% of patients in treatment with anticoagulants underwent hospitalisation (average duration of 10 days) and 22/43 patients showed potential drug-drug interactions mainly due to Warfarin. The average cost per hospitalisation was significantly greater for patients treated with Warfarin versus NOACs (€ 900 more).The lower economic impact of cases treated with NOACs versus Warfarin per DRG (€ 56 154 vs € 201,743) as for admission to the ED (€ 1894 vs € 6,952) were linked to the minor incidence of serious ADEs.

Conclusion Making a simulation, the potential saving would be proportional to the number of hospitalisations avoided, (€ 29,106,939). Despite the difference in cost of the therapies shifting from AVKs to NOACs, there could be a direct economic saving related to the lower incidence of hospitalization, and indirect from the reduction of ADE.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

5PSQ-015 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, a membrane transporter protein and principally they are metabolised by CYP3A4. NOACs administration with antibiotics is not recommended because they are powerful CYP3A4 and gp-P inhibitors. It would lead to a NOACs metabolism reduction, increasing plasma concentration and, consequently, the exposure to the active substance with the risk of bleeding.

Purpose The aim of this study consisted in searching for patients with concomitant NOACs and antifungal therapies, and examining general practitioners' prescriptions.

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

Results In 2017, 7404 patients were treated with NOACs and 2580 patientswith Itraconazole. Thirteen patients had concurrent prescriptions of NOACs and Itraconazole (0.18% of all patients with NOACs prescriptions), with a median age of 72 years (range 43–83 years). The age $\geq$75 years' old is a risk factor because NOACs metabolism is slowed down and it is possible that it increases more plasma concentration. The NOACs molecules prescribed concurrently with Itraconazole were: Apixaban for five patients, Dabigatran for four, Rivaroxaban for three and Edoxaban for one. The average number of NOACs packs delivered to a patient was 5.5 (72 in total), the exceptions were the cases of two patients 76 years' old with 14 and 24 packs prescribed concurrently with acetylsalicylic acid for the whole analysed year, although they should have been avoided in the case of increased haemorrhagic risk.

Conclusion In 2017, 1.72% of examined patients had NOACs and/or Itraconazole prescriptions, but only 0.18% of them had concurrent therapies, even if it was contraindicated because of the increase in bleeding risk. The advanced average age caused slowing of the metabolism: the frequent polypharmacy with the possibility of drug interaction increased the bleeding risk. It is appropriate to focus on each case and evaluate dose reduction, and make a therapeutic reconciliation, especially in elderly patients in polytherapy.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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5PSQ-016 UNFAVOURABLE OUTCOMES OF BLOOD TRANSFUSIONS IN HOSPITALISED ANAEMIC PATIENTS

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Background Guidelines recommend the administration of intravenous (IV) iron to patients with anaemia due to iron deficiency. Blood transfusions are the last resource, advised only in critical patients, as they quickly raise haemoglobin (Hb)