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Case Report

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When Deprescribing Gets Complicated – A Case Report

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Abstract

Introduction: *Quaternary prevention focuses on avoiding harm resulting from unnecessary medical interventions, seeking to reduce iatrogenesis. In this context, deprescribing is an essential clinical practice especially in polymedicated patients. New anticoagulants (NOACs) have an advantageous safety profile compared to older anticoagulants such as Acenocoumarol.*

Case description: *An 84-year-old woman with atrial fibrillation came to an appointment with an INR of 3,2. Her anticoagulant dose was adjusted and her pharmacological therapy was reviewed. She was then referred for an immunohemotherapy appointment where Edoxaban was prescribed. Two months later, she returned with changes in liver analysis. During one of her visits to the hospital between exams, she fractured her right humerus, which was immobilized for 3 weeks, requiring PMR later. Finally, it was realized that it was hepatotoxicity due to Edoxaban.*

Discussion: *This case illustrates a failed quaternary prevention, where an attempt to improve the patient's therapeutic profile by switching to a NOAC resulted in a serious adverse effect and further interventions. The decision should have better assessed the risk-benefit ratio, since a more careful and individualized assessment is necessary in elderly and polymedicated patients.*

Keywords: Quaternary Prevention, Deprescribing, Polypharmacy, Older Adults, Atrial Fibrillation.

Introduction

Quaternary prevention is a relatively recent concept and practice, which means the identification of persons at risk of excessive medicalization and their protection from further unnecessary interventions, avoiding iatrogenic damages and proposing ethically acceptable measures [1]. It acts as a response of family doctor facing overmedicalization, as a resistance, a “rallying cry” against the lack of humanity of large sectors of medicine [2]. For many decades, vitamin-K antagonists (VKAs) were the only available class of anticoagulants for the prevention of the embolic complication of atrial fibrillation. During the past decade, new nonvitamin-K oral anticoagulants (NOACs) have been tested and approved for these patients. More recently, several reports were published providing information that NOACs are at least as effective as VKAs and safer in several respects (ie, lower risk of intracranial haemorrhage, fewer gastrointestinal and major haemorrhages; lower risk of mortality) [3]. Convenience of use, minor drug and food interactions, a wide therapeutic window, and no need for laboratory monitoring are other advantages to consider regarding these drugs. Nonetheless, there are some conditions for which VKAs remain the drug of choice [4].

Case Description

The case is about an 84-year-old caucasian woman (Mrs M.), retired, widow who lives alone, with the support of her son. Her medical history includes rectal cancer (surgery followed by chemotherapy in 2011), deep vein thrombosis (DVP) in 2012, depression, high blood pressure, diabetes mellitus type 2, atrial fibrillation, dyslipidaemia and bilateral gonalgia. Her BMI is 29Kg/m2 and there is no alcohol, drugs or tobacco abuse. Her usual medication is Pantoprazole 40mg q.d., Furosemide 20mg q.d., Fluoxetine 20mg q.d., Propranolol 10mg b.i.d., Metformine 1000mg q.d, Enalapril 20mg q.d, Acenocoumarol 4mg by scheme, Atorvastatin 40mg q.d., Trazodone 50mg q.d., Lorazepam 1mg q.d., Tramadol + Paracetamol 75mg + 650mg q.d., and she is allergic to Penicillin.

In March 2023, Mrs. M. comes to an appointment with analysis showing an INR of 3,2. As in previous times, her anticoagulant dose was adjusted and an analytical reassessment was requested

in two weeks. Four months later, the patient returns for another consultation, her pharmacological therapy was reviewed and it was not clear why she was taking Acenocoumarol instead of a NOAC. She was then referred for an immunohemotherapy appointment where Edoxaban 30mg q.d was prescribed.

Two months have passed and she returned with changes in liver analysis (TGP 151 U/L; TGO 163 U/L; GGT 1091 U/L) without any further complaints. Given her rectal cancer in 2011, tumour markers, a colonoscopy and a hospital consultation were requested. The tests carried out came back without any significant changes, however during one of her visits to the hospital, she fractured her right humerus, which was immobilized for 3 weeks, requiring PMR later for months.

Finally, in March 2024 it was realized that it was hepatotoxicity due to Edoxaban and with the reintroduction of the previous anticoagulant and a gradual adjustment, the patient was stabilized again.

Discussion

Although new oral anticoagulants offer a better safety profile and greater convenience compared to vitamin K antagonists, their prescription isn't without risks and should be carefully individualized.

This case reinforces the idea that the introduction of a new drug, even one considered safer, can represent an increased risk in the elderly. The observed iatrogenic cascade with altered analytical results, increased vulnerability, additional hospitalizations and consultations, clearly exemplifies the type of harm that quaternary prevention seeks to avoid. However, it is important to emphasize the critical review of therapy and its deprescribing and reversal of decisions when adverse effects arise.

In conclusion, it is extremely important to carefully weigh the risk-benefit of each medical intervention, especially in elderly and polymedicated patients, and quaternary prevention and deprescribing should be considered central components of good clinical practice, promoting safer, more personalized, and patient-centered care.

Declarations

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Conflict of Interest

The authors declare no conflict of interest.

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