Evaluating the Knowledge of Moroccan Patients Regarding their Oral Anticoagulant Treatment Admitted in Cardiology and Cardiovascular Surgery Units

Esso Eric Valery Latt[1], Youssef Moutaouakkil [2], Badreddine Moukafih [2], Yahia Cherrah [3], Jamal Lamsaouri [4], Yassir Bousliman [5]

[1]Resident in Clinical Pharmacy, Laboratory of Pharmacology and Toxicology, Faculty of Medicine and Pharmacy, Mohammed V University in Rabat, Rabat Institute, Rabat, Morocco, [2]Specialist in Clinical Pharmacy, Laboratory of Pharmacology and Toxicology, Faculty of Medicine and Pharmacy, Mohammed V University in Rabat, Rabat Institute, Rabat, Morocco, [3]Professor of Pharmacology, Laboratory of Pharmacology-Toxicology, Faculty of Medicine and Pharmacy, Rabat Institute, University Mohamed V, RabatMorocco, [4]Professor of Therapeutic Chemistry, Laboratory of Medicinal Chemistry, Faculty of Medicine and Pharmacy, Rabat Institute, University Mohamed V, Rabat-Morocco, [5]Professor of Toxicology, Laboratory of Pharmacology-Toxicology, Faculty of Medicine and Pharmacy, Rabat Institute, University Mohamed V, RabatMorocco

Abstract

Background. Vitamin K antagonists (VKAs), the most commonly used anticoagulants worldwide. Our aim was to assessing the moroccan patients' knowledge regarding their VKA treatment after their hospital stay in Cardiology and Cardiovascular Surgery units before being discharged home.

Methods. One hundred and twenty-three patients were enrolled in this prospective, monocenter study. Their level of knowledge was assessed by a semi-structured interview between the pharmacist and the patients.

Results. 75,61% of patients were able to give the name of the drug they were taking, 76,42 % could explain its effect and finally, 79,67% of patient knew their INR target values. 19,51 % of patients were able to describe the symptoms in case of overdose and what to do in that case. 47,15 % of patients were aware of food interactions and 56,09 % of self-medication risks.

Conclusion. Our study, as in previous studies among Patients with chronic diseases, identified some gaps in knowledge. These findings indicate the need for better education of patients regarding their VKA treatment.

Keywords: Oral anticoagulant treatment, VKAs, Patients, Knowledge, Questionnaires

Background

Vitamin K antagonists (VKAs), the most commonly used anticoagulants worldwide for the prevention of stroke due to atrial fibrillation, treatment and secondary prevention of venous thromboembolism, prevention of valvular thromboembolism in patients with prosthetic heart valves, and secondary prevention of acute myocardial infarction, have a narrow therapeutic window, and, therefore, represent a massive challenge in dosing, given their highly interindividual variation in activity and metabolism. [1] Thus, they have risks for outcomes including under- and over-anticoagulation and potential serious complications, especially in the elderly. [2] The most common adverse event experienced by patients who are treated with VKAs is bleeding. [3] The incidence of major bleeding in patients receiving long-term anticoagulation with a vitamin K antagonist

Correspondent author:
Dr.Youssef Moutaouakkil
Phone: 00 212 679271669
Pharmacy Department, Mohammed V Military Teaching Hospital, Faculty of Medicine and Pharmacy, Mohamed V University, Rabat, Morocco
Email: youssefmoutaouakkil@yahoo.com

in contemporary studies is 1–3% per year. [3] Knowledge about this treatment alone does not change the attitudes and health behaviour related to living with chronic illness. Nevertheless, knowledge about a disease and its treatment is important for coping with the symptoms and living well with a chronic illness. Integration of knowledge, skills, and values enhances an individual's health competence, which in turn may affect the patient's involvement with their disease, health, work, coping, and quality of life. [4,5] To our knowledge, few studies have been published on Evaluating the knowledge of patients on Oral anticoagulant treatment, in particular in the past few decades. This study was aimed at assessing the patients' knowledge regarding their VKA treatment after their hospital stay in Cardiology and Cardiovascular Surgery units at the military teaching hospital, Rabat, Morocco before being discharged home.

Patients and Methods

a. Studied population.

This prospective, monocenter study was conducted at the military teaching hospital, Rabat, Morocco from January 1st, 2017 to December 31st, 2017 in Cardiology and Cardiovascular Surgery units. The study's inclusion criteria were: (to take the VKA treatment for a minimum of 3 months and continue at home; to have a level of oral comprehension compatible with a semistructured interview for knowledge assessment) ; The exclusion criteria were: (severe comprehension and/or cognitive disorders that could impact the quality/reliability of the collected data.)

b. Methods

The Oral anticoagulant treatment knowledge questionnaire was designed as a tool, using the existing literature, [6-10] practicing physicians, and cardiologists to assess the knowledge and awareness among the patients regarding their Oral anticoagulant treatment. The questionnaire was initially designed in English and then translated to Arabic language.

The questionnaire consists of 16 items. to assess the patients' knowledge and awareness regarding their Oral anticoagulant treatment, respectively. The patients who met the inclusion criteria were interviewed (Verbal exchange between the healthcare professional and interviewed patients) to assess their knowledge and awareness about Oral anticoagulant treatment.

The answers to the questionnaire were analyzed for all the patients included; The correct response rate for each of the questionnaire's item was calculated (ratio of the number of correct answers vs. number of total answers).

Results

a. Patients' characteristics

The basic demographic, pathological antecedents and reason for hospitalisation at the military teaching hospital, Rabat, Morocco, were shown in Table 1

The VKA drugs prescribed was acenocoumarol Sintrom® (100%) because it is the only one marketed in Morocco.

b. Evaluation of vitamins K antagonists treatment knowledge

Patients knew the name of their VKA (75,61%), the treatment start-up date (91,87%), indication (79,67%), role of the medicine (76,42%) and INR target levels (79,67%). However most patients (19,51%) did not know much about drug toxicity, symptoms of overdose and what steps to take in that case. Finally, patients had a strong notions on the following items: what to do when forgetting to take the medicine (45,53%), the need for close monitoring (38,21%), the importance of regularly taking the treatment (59,35%), risks incurred by taking too low a dosage (42,27%) and finally selfmedication risks (56,09%).

Table 1: Selected demographic , pathological antecedents and reason for hospitalisation

Selected variables		Numbers	Percentage
Gender	Male	69	56,10 %
	Female	54	43,90 %
Age (years)	30–39	7	05,70 %
	40–49	19	15,44 %
	50–59	75	60,97 %
	60–70	17	13,82 %
	>70	5	04,06 %
Background	Diabetes	42	34,14 %
	Hypertesion	78	63,41 %
	Stroke	03	02,44 %
Reason for Hospitalization	hemiplegia secondary to ischemic stroke	48	39,02 %
	paraplegia or quadriplegia	27	21,95 %
	multiple trauma	30	24,39 %
	Acute inflammatory demyelinating polyneuropathy	10	8,13 %
	knee replacement	08	6,50 %

Discussion

Health education has been reported as a base for managing chronic diseases. Moreover, it provides individuals with the security and knowledge about their health and the health of those for whom they care, and improves health behaviors that enhance the well being of the general population. Previous research suggests that patients who have more knowledge about their illness and its treatment are more likely to succeed in managing that illness.

During their hospital stay, patients become more knowledgeable about their treatment thanks to healthcare professional (physicians, pharmacists, nursing, caregivers). However, these notions are not sufficient to guarantee a safe use of VKA treatments.

If patients know the name and role of their VKA drugs, very few of them were aware of what the overdose symptoms were and what to do in that case (notions belonging to the ''know-how'' field), even though patients should be understand these risks for their own safety. Some similar results were reported by other studies. [8-11] In other study only few patients were aware of hemorrhaging risks. [8,12] These results highlight the need to improve the way information is given to the patient on this specific point. However, patients were more knowledgeable on the risks induced by under dosage of VKA. It seems that patients have an easier time understanding that they could get sick again if the treatment's is not as effective. The knowledge of patients on the risks involved with selfmedication was quite weak 56,09 %, especially when we know that more than two thirds of overdoses are caused by drug interactions increasing the effects of VKA treatments.

The knowledge of patients on the Therapeutic effect and even what their INR target level should be was very satisfaying 76,42 % and 79,67 % respectively, this can

be explained by the fact those Patients that had been treated for several years were not aware of this basic notions on VKA.

Conclusion

Patients were knowledgeable regarding their VKA treatment. However, our study, as in previous studies among Patients with chronic diseases, identified some gaps in knowledge. These findings indicate the need for better education of patients regarding their VKA treatment.

Ethical Clearance: Compliance with Ethical Standards

Source of Funding: Self

Conflict of Interest: We declare that we have no conflict of interest.

Abbreviations: VKAs : Vitamin K antagonists

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