



Prescribing of Xylometazoline in the Outpatient Department of a Public Hospital

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Authors' contributions

This work was carried out in collaboration between both authors. Author NJA designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Authors NJA and MAM managed the analyses of the study. Author NJA managed the literature searches. Both authors read and approved the final manuscript.

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ABSTRACT

Objective: The aim of this study is to analyze the prescribing pattern of Xylometazoline in the outpatient department in a public hospital.

Methods: This is a retrospective cross-sectional study that was conducted in a public hospital in Alkharj. Prescription data was collected from electronic medical records in the outpatient department.

Results: A total of 600 patients received xylometazoline during the study time. 55% of them were males and more than 57% of them aged less than 10 years. More than 86% of the prescriptions were prescribed by the emergency department followed by E.N.T department (13%). Most of the patients received xylometazoline for 3 days and 15.17% of them received it for 5 days.

Conclusion: Xylometazoline was prescribed commonly in the outpatients department and could cause several adverse events so its prescribing should be assessed continuously to prevent its adverse effects and to decrease its interactions with drugs.

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1. INTRODUCTION

Decongestants are a type of medications that can provide a relief for nasal congestion (a blocked or stuffy nose) for short-term [1]. Decongestants are available in different forms including tablets, capsules, liquids or syrups, nasal sprays, drops and also as flavored powders to be dissolved in hot water [1].

Xylometazoline nasal is a one of the decongestant that leads to constriction or narrowing of the blood vessels in the nasal passages [2]. It works by narrowing the blood vessels in the nose area, reducing swelling and congestion [3]. Therefore, nasal xylometazoline is used to treat stuffy nose caused by sinus irritation, common cold or allergies [2]. Dorn et al confirmed that the local use of oxymetazoline and xylometazoline are well tolerated in the treatment of acute rhinitis [4]. Nevertheless, there are several adverse effects are caused by it; the most common are burning, dryness or stinging inside your nose in addition to sneezing and runny nose [2].

It is important to study the prescribing patterns of drugs because it determines the patients' exposure to medications and has also a vital role in the management of diseases [5]. The studying of medicine prescribing pattern being a part of pharmacoepidemiology and describes the types, amount and determinants of drug use [6]. Vanitha et al state that the main aim of drug utilization studies is to facilitate the rational use of medications in different patients [7]. Therefore, the aim of this study is to analyze the prescribing pattern of xylometazoline in the outpatient department in a public hospital.

2. METHODS

This is a retrospective cross-sectional study that was conducted in a public hospital in alkharj. Prescription data was collected from electronic medical records in the outpatient department.

The inclusion criteria included the patient who received xylometazoline in the outpatient department between 1st of July till the end of December 2018. So, the records of patients who didn't receive xylometazoline and the inpatient records were excluded from the study.

The data was collected using Excel sheet from the medical records after the approval of the study by the ethical committee in the hospital with a log number 20-131E. After that, the data were analyzed descriptively and the results were represented as numbers and percentages.

3. RESULTS AND DISCUSSION

A total of 600 patients received xylometazoline during the study time. 55% of them were males and more than 57% of them aged less than 10 years. Patients' Personal data are shown in Table 1.

Most of the prescribers were residents and only 1.33% of them were consultant. The level of prescribers is shown in Table 2.

More than 86% of the prescriptions were prescribe by the emergency department followed by Ear, nose and throat (E.N.T) department (13%). The prescribing departments are shown in Table 3.

Most of the patients received xylometazoline for 3 days and 15.17% of them received it for 5 days. Duration of therapy is shown in Table 4.

Goud et al. [8] reported that in outpatient department of otolaryngology in a tertiary care teaching hospital, the most commonly prescribed drug in general was xylometazoline (16.33%) and that the most commonly prescribed topical preparation was xylometazoline (55.23% of the topical agents). Another study found that the most commonly prescribed drugs to patients attending morning and evening clinics of primary care doctors in Bahrain were diclofenac sodium, amoxicillin, ibuprofen, chlorpheniramine, hyoscine butylbromide, Actifed®, Benylin® and xylometazoline [9].

Vanitha et al reported that the most commonly prescribed topical preparation in patients attending ear, nose, and throat outpatient department in a tertiary care hospital was ciprofloxacin ear drops (45%) followed by xylometazoline nasal drops (39%) [7]. Another study was conducted in Jizan and found that Xylometazoline was prescribed inadvertently [10].

Table 1. Personal data of the patients

Variable	Category	Number	Percentage
Gender	Male	330	55.00
	Female	270	45.00
Age	Less than 10	345	57.50
	10-19	118	19.67
	20-29	60	10.00
	30-39	37	6.17
	40-49	24	4.00
	50-59	8	1.33
	More than 59	8	1.33

Table 2. The level of the prescribers

Level of the prescriber	Number	Percentage
Consultant	8	1.33
Resident	581	96.83
Specialist	11	1.83

Table 3. The prescribing departments

Department	Number	Percentage
E.N.T	78	13.00
Emergency	519	86.50
Endoscopy	1	0.16
Gastroenterology	1	0.16
Pediatrics	1	0.16

Table 4. Duration of therapy

Duration	Number	Percentage
1 Day	1	0.16
2 Day(S)	8	1.33
3 Day(S)	401	66.83
4 Day(S)	7	1.17
5 Day(S)	91	15.17
7 Day(S)	86	14.33
10 Day(S)	4	0.67
15 Day(S)	2	0.33

Daniel et al reported that for Ear, nose and throat outpatients, Xylometazoline was prescribed in 51 prescriptions out of 157 prescriptions (32.48%) [11]. In addition, Sharif et al found that among pediatric outpatients in Umm Al Quwain, the most commonly prescribed drugs were paracetamol (28.27%) and xylometazoline (26.73%) [12]. Xylometazoline could cause several Adverse effects including common adverse effects such as dryness, burning, or stinging inside your nose; sneezing; and runny nose [13]. Additionally, there are several serious side effects including blurred vision; headache,

dizziness, nervousness; fast or pounding heartbeats; a light-headed feeling, like you might pass out; wheezing, feeling short of breath [13]. Moreover, some patients may develop signs of an allergic reaction: hives; difficult breathing; swelling of your face, lips, tongue, or throat [13].

Regarding Xylometazoline nasal Drug Interactions, Xylometazoline interactions with several drugs; it has 6 major drug interactions with dihydroergotamine, ergonovine, ergotamine, iobenguane I 131, methylergonovine and methysergide maleate. Moreover, it has and 52 moderate drug interactions [14].

The main limitation of the study was that the common indications or reason for using the drug could not be revealed because no information about diagnosis was found in the electronic records.

4. CONCLUSION

Xylometazoline was prescribed commonly in the outpatients department and could cause several adverse events so its prescribing should be assessed continuously to prevent its adverse effects and to decrease its interactions with drugs.

CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

The data was collected using Excel sheet from the medical records after the approval of the study by the ethical committee in the hospital with a log number 20-131E.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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