Original Research Article

The Use of Fluorometholone Eye Drops in a Public Healthcare Organization in Riyadh Province

ABSTRACT

Aim: This study aimed to describe the use of fluorometholone eye drops in a public healthcare organization in Riyadh Province

Methodology: This is a retrospective study that includes reviewing the electronic prescriptions of fluorometholone eye drops among outpatients in a public healthcare organization in Riyadh Province

Results: During the study period, only 42 patients received fluorometholone eye drops. More than 64% of them were females and the age of 28.57% of them was between 20 and 29 years. More than 73% of the patients received fluorometholone eye drops for 1 week. Most of the prescriptions were prescribed by residents. More than 95% of the prescriptions were written by ophthalmology department.

Conclusion: The present study showed that fluorometholone eye drops was uncommonly prescribed in Al-Kharj. More studies are needed to describe the frequency of using and the pattern of prescribing fluorometholone eye drops.

Keywords: Eye drops, fluorometholone, glucocorticoid, outpatient, use

INTRODUCTION

Corticosteroids inhibit the inflammatory response to a variety of inciting agents and probably delay or slow healing. They inhibit the edema, leukocyte migration, fibrin deposition, capillary dilation, fibroblast proliferation, capillary

proliferation, deposition of collagen, and scar formation associated with inflammation [1]. Topical glucocorticoid employed, usually as eye drops, in the management of inflammatory and allergic conditions of the eye. It has also been used topically in the management of numerous skin conditions [1].

Fluorometholone is used to manage certain eye disorders caused by inflammation or injury and comes in the forms of eye drops and an eye ointment [2,3]. Fluorometholone eye drops are generally prescribed by an eye specialist and are used to manage short-term inflammatory eye conditions in adults and in children aged over 2 years [4]. Efficacy and safety have not been established in children younger than 2 years of age [3].

Common side effects of using fluorometholone ophthalmic are feeling like something is in the eye, mild stinging or burning in the eyes, blurred vision, drooping eyelids, and red or puffy eyelids [5]. Occasionally people can be allergic to eye drops, particularly if the eye drops contain a preservative [4]. Fluorometholone should not be used for longer than prescribed because doing so may increase your risk of side effects [6]. Use of it in high doses or for prolonged periods may cause serious eye problems such as high pressure inside the eyes [6]. Fluorometholone ophthalmic interact with several medicines such as Aspirin, diphenhydramine, calcium, duloxetine, Fish Oil, fluticasone nasal, and pregabalin [7].

Looking into the increasing importance of drug utilization studies, there was a need to conduct a similar study in the field of ophthalmology [8]. So, this study aimed to describe the use of fluorometholone eye drops in a public healthcare organization in Riyadh Province.

METHODOLOGY

This is a retrospective study that includes reviewing the electronic prescriptions of fluorometholone eye drops among outpatients in a public healthcare organization in Riyadh Province. The study was conducted from January 2018 to June 2018. The inclusion criteria include outpatient prescriptions that contain fluorometholone eye drops in the study period. Exclusion criteria include the prescriptions that were prescribed by other setting and the outpatient prescriptions that don’t contain a fluorometholone eye drops.

The collected data included the demographic data of patients, the number of fluorometholone eye drops prescriptions that were prescribed during different months of the study, duration of fluorometholone eye drops use, the level of prescribers, and the departments that prescribed fluorometholone eye drops.

The data were collected and analyzed by Excel software and the descriptive data were represented as numbers and percentages.

RESULTS and DISCUSSION

During the study period, only 42 patients received fluorometholone eye drops. More than 64% of them were females and the age of 28.57% of them was between 20 and 29 years. Table 1 shows the personal data of the patients.

Table 1. The personal data of the patients.

Variable	Category	Number	Percentage
Gender	Female	27	64.29
	Male	15	35.71
Age	Less than 10	4	9.52
	10-19	4	9.52
	20-29	12	28.57
	30-39	6	14.29
	40-49	5	11.90
	50-59	5	11.90
	More than 59	6	14.29
Nationality	Saudi	38	90.48
	Non- Saudi	4	9.52

Table 2 shows the number of fluorometholone eye drops prescriptions that were prescribed during different months of the study. More than 26% of the prescriptions that contain fluorometholone eye drops were prescribed in April.

Table 2. The number of fluorometholone eye drops prescriptions.

Month	Number	Percentage
January	4	9.52
February	4	9.52
March	10	23.81
April	11	26.19
May	10	23.81
June	3	7.14

Table 3 shows the duration of fluorometholone eye drops use. More than 73% of the patients received fluorometholone eye drops for 1 week.

Table 3. The duration of fluorometholone eye drops use.

Duration	Number	Percentage
1 Week	31	73.81
10 Days	3	7.14
2 Weeks	3	7.14

1 Month	5	11.90

Table 4 shows the level of prescribers who prescribed fluorometholone eye drops. Most of the prescriptions were prescribed by residents.

Table 4. The level of prescribers.

Prescribers Level	**Number**	**Percentage**
Specialist	2	4.76
Resident	40	95.24
Consultant	0	0.00

Table 5 shows the departments that prescribed fluorometholone eye drops. More than 95% of the prescriptions were written by ophthalmology department.

Table 5. The departments that prescribed fluorometholone eye drops.

Department	**Number**	**Percentage**
Emergency	2	4.76
Ophthalmology	40	95.24
Total	42	100

Fluorometholone eye drops was uncommonly prescribed in Al-Kharj. This could be due to the availability of many topical anti-inflammatory agents. In contrast to the result of the present study, Baba et al reported that fluorometholone is a widely used anti-inflammatory ophthalmic formulation, which causes a lower ocular hypertensive response than other glucocorticoid medicines [9]. Ahmed stated that fluorometholone was prescribed to 10.19% of the patients who visited the ophthalmological outpatient department [8].

Most of the prescriptions were prescribed by residents and only 4.76 % of the prescriptions were prescribed by a specialist. Stewart informed that fluorometholone eye drops are usually prescribed by an eye specialist [4]. Moreover, the National Institute for Health and Care Excellence stated that fluorometholone drops prescriptions are commonly written by an ophthalmologist (eye specialist) [10].

As fluorometholone eye drops is used to manage several eye disorders by relieving symptoms such as swelling, redness, and itching [2,3,11]. It is rational that most of the prescriptions that contained fluorometholone eye drops were written by ophthalmology department.

Most of the patients received fluorometholone eye drops for 1 week. It is rational because eye drops that contain a corticosteroid shouldn't be used for more than 10 days except under strict ophthalmic supervision with regular checks for intraocular pressure [12]. Allergan Pharmaceuticals informed that fluorometholone should not be used for more than one week unless the doctor or eye specialist recommends the use of it for prolonged period [13].

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.

CONCLUSION

The present study showed that fluorometholone eye drops was uncommonly prescribed in Al-Kharj due to the availability of numerous alternative agents that are used to inhibit the inflammatory response. More studies are needed to describe the frequency of using fluorometholone eye drops in other settings and to explore the frequency of using other topical glucocorticoid.

Ethical Approval:

As per international standard or university standard ethical approval has been collected and preserved by the authors.

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COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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