

Original Research Article

The Outpatient Prescribing of Topical Betamethasone in Al-Kharj

ABSTRACT

Aim: The present study aimed to describe the prescribing pattern of topical betamethasone in the outpatient setting in Alkharj.

Comment [Ma1]: For?

Methodology: This retrospective study that included collecting data from the electronic prescriptions in a public hospital in Alkharj in 2018.

Results: During the study period from Jan to Dec 2018 only 46 patients received topical betamethasone. Most of the patients were female (63.04%). About 71.74% of the prescribed betamethasone was in ointment form and 28.26% in lotion form. Most of the prescribers were residents (97.83%). Most of the prescriptions were written by dermatology department (58.70%).

Conclusion: The use of topical betamethasone was uncommon and this could be due to the availability of other topical corticosteroids and other alternatives. It is important to increase the knowledge of health care workers and the patients regarding the use of topical corticosteroids.

Keywords: Betamethasone, corticosteroids, outpatient, prescribing, topical.

INTRODUCTION

Medication plays a vital role in managing diseases and in improving a patient's quality of life [1]. The medication should be used correctly by giving the right medication to the right patient and at the correct dose for a suitable duration [1]. Inappropriate and excessive prescribing results in numerous negative consequences such as wastage of the public economy, increased adverse drug reaction, increased risk of toxicity, decreased faith in the medical profession, and increased in bacterial resistance [2].

Comment [Ma2]: space

Prescriptions represent a core communicating medication plans from physicians to pharmacists and finally, to patients [3]. Prescriptions can as well be used as a measure of the quality of medical education, socio-cultural beliefs and observance of the laws and regulations [4].

Comment [Ma3]: space

Outpatient Pharmacy Department is one of the pharmacy departments that providing pharmaceutical care to the patients. The main roles of pharmacist in outpatient pharmacy are prescription screening, medication filling, dispensing, counselling, in addition to other managements works [5]. Every job needs to be done in suitable ways in order to deliver the best pharmaceutical care to the patients [5].

Betamethasone is a prescription medication use to manage several conditions such as dermatologic disease, allergic reactions, endocrine disorders, hematologic disorders, gastrointestinal disease, renal diseases, neoplastic disease, ophthalmic diseases, rheumatic disorders, in addition to disorders affecting the nervous system [6]. It works by activating natural substances in the skin to reduce swelling, itching, and redness [7]. Betamethasone topical is available as ointment, cream, lotion, gel, spray or foam dosage forms [8].

The data about the frequency and the pattern of betamethasone prescribing are limited. So, the present study aimed to describe the prescribing pattern of topical betamethasone in the outpatient setting in Alkharj.

METHODOLOGY

This retrospective study that included collecting data from the electronic prescriptions in a public hospital in Alkharj in 2018. The study was conducted to know the prescribing pattern of topical betamethasone in the outpatient setting of the hospital.

committee. These data include demographic data, dosage forms of the prescribed betamethasone, the duration of betamethasone use, the level of prescribers, and the departments that prescribed betamethasone.

The data were collected using Excel software and represented descriptively as frequencies and percentages. The data were collected after the approval of the study by Institutional Review Board.

RESULTS and DISCUSSION

During the study period from Jan to Dec 2018 only 46 patients received topical betamethasone. Most of the patients were female (63.04%). Most of the patients were in the age groups of 40-49 (23.91%), 10-19 (17.39%), 30-39 (17.39%) and 50-59 (17.39%). Table 1 shows the personal data of the patients who received topical betamethasone.

Table 1. The personal data of the patients.

Variable	Category	Number	Percentage
Gender	Male	17	36.96
	Female	29	63.04
Age	Less than 10	2	4.35
	10-19	8	17.39
	20-29	4	8.70
	30-39	8	17.39
	40-49	11	23.91
	50-59	8	17.39
	60-69	4	8.70
	More than 70	1	2.17
Nationality	Saudi	39	84.78
	Non- Saudi	7	15.22

The second table shows the dosage forms of the prescribed betamethasone. About 71.74% of the prescribed betamethasone was in ointment form and 28.26% in lotion form.

Table 2. Dosage forms of the prescribed Betamethasone.

Prescribers Level	Number	Percentage
Lotion	13	28.26
Ointment	33	71.74

Table 3 shows the duration of betamethasone use. Most of the patients used betamethasone for 1 month (32.61%), for 1 week (28.26%) and for 2 weeks (23.91%).

Table 3. Duration of betamethasoneuse.

Duration	Number	Percentage
2 Months	5	10.87
7 Weeks	1	2.17
1 Month	15	32.61
2 Weeks	11	23.91

1 week	13	28.26
5 Days	1	2.17

Table 4 shows the level of prescribers. Most of the prescribers were residents (97.83%) and only 1 prescriber was consultant (2.17%).

Table 4. The level of prescribers.

Prescribers Level	Number	Percentage
Specialist	0	0.00
Resident	45	97.83
Consultant	1	2.17

Table 5 shows the departments that prescribed betamethasone. Most of the prescriptions were written by dermatology department (58.70%) followed by ophthalmology department (21.73%).

Table 5. The prescribing' departments.

Department	Number	Percentage
Dermatology	27	58.70
Ear-Nose-Throat (E.N.T)	2	4.35
Emergency	4	8.70
Internal Medicine	2	4.35
Nephrology	1	2.17
Ophthalmology	10	21.73

Betamethasone was prescribed mainly by dermatology department and this is rational because it is topical and used mainly to treat dermatologic conditions. Betamethasone topical gel, cream, ointment, and lotion are used to help relieve redness, swelling, itching, or other discomforts caused by certain skin conditions [9]. It is a corticosteroid that clinicians use to manage skin diseases that cause inflammation and itchiness [10]. Ference and Last reported that although the use of topical steroids is a common practice, evidence of effectiveness exists only for select conditions, such as eczema, psoriasis, vitiligo, phimosis, atopic dermatitis, lichen sclerosus, and acute radiation dermatitis [11]. Furthermore, the National Health Service stated that topical corticosteroids are used for the management of numerous inflammatory conditions of the skin, in particular eczema, insect stings, contact dermatitis, and eczema of scabies [12].

Gabros et al stated that topical corticosteroids play a main role in the management of several dermatologic conditions and that they are approved by Food and Drug Administration and indicated for the use of inflammatory

and pruritic presentations of dermatologic conditions [13]. A previous study also reported that topical corticosteroids are effective for conditions involving immunological, hyper-proliferation, and inflammatory properties [14].

In the present study topical betamethasone were prescribed as an ointment form or as a lotion form only this could be due to the difference in the dryness of the skin and the presence of hairy areas. This product is available in different dosage forms include spray, cream, lotion, or ointment [10]. Betamethasone prescribed a cream if the affected areas of the skin are moist or weeping, an ointment is prescribed if the skin is dry and the lotion forms is prescribed for larger or hairy areas of skin [15]. Betamethasone spray is indicated for the management of mild to moderate plaque psoriasis [16]. Formulations that spread more easily such as Creams may be preferred for hairy areas [17].

It should be noticed that although betamethasone was used topical but still could cause several adverse effects. Topical corticosteroids not without potential adverse effects, but risks vary depending on preparation and duration of therapy [18]. Topical corticosteroids cause local adverse effects including atrophy, perioral dermatitis, striae, acne, rosacea, and purpura in addition to that they could cause systemic adverse effects [19].

In general, topical corticosteroids are available in a variety of dosage forms, which allows a treatment regimen to be tailored to a patient's individual needs [18]. Ference and Last stated that the successful administration of topical corticosteroids depends upon obtaining an accurate diagnosis, choosing the correct drug, selecting the appropriate vehicle and potency, and the frequency of application [11]. Bewley et al reported that patients should be advised not to exceed the prescribed treatment and to use topical corticosteroids under medical supervision [20]. They also stated that pharmacists are the last line of healthcare that the patient sees before using the medicine and play an essential role in enforcing the correct usage and ensuring patient understanding of the treatment plan [20].

CONCLUSION

The use of topical betamethasone was uncommon in Al-Kharj and this could be due to the availability of other topical corticosteroids and other alternatives. The use of topical betamethasone and other corticosteroids should be supervised by health care providers. So, it is important to increase the knowledge of health care workers and the patients regarding the use of topical corticosteroids.

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.

REFERENCES

1. Promoting rational use of medicine: core components [internet]. 2002 [cited 2018]. Available: <http://apps.who.int/medicinedocs/pdf/h3011e/h3011e.pdf>
2. Ragam AS, Acharya S, Holla R. Assessment of drug use pattern using World Health Organization prescribing indicators in a tertiary care hospital in Mangalore: a cross-sectional study. *Natl J Physiol Pharm Pharmacol*. 2017;7(10):1026
3. Hassan NB, Ismail HC, Naing L, Conroy RM, Rahman AR. Development and validation of a new prescription quality index. *Br J Clin Pharmacol*. 2010;70:500-13.
4. Varghese NJ, Ramanarayanan V, Janakiram C, Joseph J. Assessment of quality of prescription writing among dental and medical students and practitioners in Kerala. *J Nat Sci Biol Med*. 2018;9:27-33.
5. Siti Maisharah SG, Sabariah Noor H, Nur Hafzan MH, Gillani SW. Outpatient Pharmacy Department (OPD) and Counseling Clerkship among Final Year Pharmacy Undergraduates: Students' Expectation and Satisfaction. *Int J Pharm Pharm Sci*. 2012;4(5):484-489.
6. Rxlist.Betamethasone. Available: https://www.rxlist.com/consumer_betamethasone_celestone_betaject/drugs-condition.htm.
7. Medlineplus. Betamethasone topical. Available: <https://medlineplus.gov/druginfo/meds/a682799.html>
8. Drugs.com. Betamethasone topical. Available: <https://www.drugs.com/betamethasone-topical.html>
9. Medicalnewstoday.What to know about betamethasone. Available: <https://www.medicalnewstoday.com/articles/325364>
10. Mayoclinic. Betamethasone dipropionate topical application route. Available: <https://www.mayoclinic.org/drugs-supplements/betamethasone-dipropionate-topical-application-route/description/drg-20073667>.
11. Ference JD, Last AR. Choosing topical corticosteroids. *Am Fam Physician*. 2009;79(2):135-140.

12. NHS. Review of Repeat Prescribing of Topical Corticosteroids. Available: <https://www.cambridgeshireandpeterboroughhccg.nhs.uk/easysiteweb/getresource.axd?assetid=3191&type=0&service=1>
13. Gabros S, Nessel TA, Zito PM. Topical Corticosteroids. [Updated 2021 Jul 13]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021. Available: <https://www.ncbi.nlm.nih.gov/books/NBK532940/>
14. Giannotti B. Current treatment guidelines for topical corticosteroids. *Drugs*. 1988;36(Suppl 5):9-14.
15. Patient.info. Betamethasone for severe inflammatory skin conditions. Available: <https://patient.info/medicine/betamethasone-for-severe-inflammatory-skin-conditions-audavate-betnovate-betacap-betasil-bettamousse-diprosone>
16. Drugs.com. Betamethasone spray. Available: <https://www.drugs.com/pro/betamethasone-spray.html>
17. Boulanger J, Ducharme A, Dufour A, Fortier S, Almanric K, Comité de l'évolution de la pratique des soins pharmaceutiques (CEPSP); et al. Management of the extravasation of anti-neoplastic agents. *Support Care Cancer*. 2015;23(5):1459-1471.
18. Pharmacytimes. Topical corticosteroid. Available: <https://www.pharmacytimes.com/view/topical-corticosteroids>
19. Coondoo A, Phiske M, Verma S, Lahiri K. Side-effects of topical steroids: A long overdue revisit. *Indian Dermatol Online J*. 2014;5(4):416-25.
20. Bewley A, Dermatology Working Group. Expert consensus: time for a change in the way we advise our patients to use topical corticosteroids. *Br J Dermatol*. 2008;158(5):917-20.