



ORIGINAL RESEARCH PAPER

Pharmacology

STUDY THE DRUG UTILIZATION AND EFFECT OF CORTICOSTEROIDS IN DERMATOLOGICAL DISEASES

KEY WORDS: Skin Diseases, Outpatient, Corticosteroids, Treatment Guidelines

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ABSTRACT

Various medicines used in the treatment of skin diseases individually and in combinations are proactive antibiotic, steroids, antifungal, benzoyl peroxide salicylic acid, anti-histaminic, vitamins and minerals and certain analgesics Such analysis not only improves the standards of medical treatment at all levels in the health system, but also supports in the identification of drug use related problems such as, drug-drug interaction, poly-pharmacy and adverse drug reaction WHO. The result of the study was that majority of the patients were under the different ages. It can be observed that Betamethasone was most commonly prescribed steroid (93.45%) followed by Clobetasol propionate (4.36%). There might be difference in the study outcomes of the present study with that of the other studies already published may be because of the study environment, educational barriers of the study population, geographical difference, difference in food habits, medication availability with reference to the present study, etc. Even though, with the presence of differences in the studies the prescription patterns are almost the same. Hence concluded Betamethasone was the most common steroids prescribed, followed by Clobetasol propionate.

INTRODUCTION

The number of case reports about a drug problem or adverse effects can be related to the number of patients exposed to the drug to assess the potential magnitude of the problem. If it is possible to detect that the reaction is more common in a certain age group, in certain conditions or at a given dose level, improving the information on indications, contraindications and appropriate dosages may be sufficient to ensure safer use and avoid withdrawal of the drug from the market.

The prescriptions need to be audited periodically to improve the therapeutic effectiveness, minimize the adverse effects, and provide feedback to prescribers. Hence, these audits are performed to supervise, check, and analyze the execution of medical treatment standards at all the levels of the health-care delivery system. Topical corticosteroids are effective drugs in an array of dermatological diseases and abundant choices are available in different formulations. Optimal therapy involves careful consideration of factors such as potency, formulation, responsiveness and the cost of the topical steroid.

CORTICOSTEROIDS:

These are used to treat skin conditions including eczema. Corticosteroids come in many different forms including foams, lotions, ointments, and creams.

NON-STEROIDAL OINTMENT:

The ointment crisaborole is used to treat mild to moderate eczema.

RETINOIDS:

These medications (such as Retin-A and Tazorac) are gels, foams or creams derived from vitamin A and are used to treat conditions including acne.

SALICYLIC ACID :

This drug is sold in lotions, gels, soaps, shampoos, washes, and patches. Salicylic acid is the active ingredient in many skin care products for the treatment of acne and warts.

SOME COMMON ORAL OR INJECTION TREATMENTS FOR SKIN CONDITIONS INCLUDE:

ANTIBIOTICS:

Oral antibiotics are used to treat many skin conditions. Common antibiotics include dicloxacillin, erythromycin, and tetracycline.

Antifungal agents: Oral antifungal drugs include fluconazole and itraconazole. These drugs can be used to treat more severe fungal infections. Terbinafine is an oral antifungal medicine that may be used to treat fungal infections of the nails.

CORTICOSTEROIDS:

These medications, including prednisone, can be helpful in treating skin conditions linked to autoimmune diseases including vasculitis and inflammatory diseases such as eczema. Dermatologists prefer topical steroids to avoid side effects; however, short-term use of prednisone is sometimes necessary.

METHODOLOGY:

Statistical analysis: The data was collected and compiled in Microsoft excel 2007. Descriptive analysis was applied and frequency and numbers were obtained.

TABLE 1: CATEGORY WISE DISTRIBUTION OF DRUGS. (N=4357)

S.NO	CATEGORY OF DRUGS	NUMBER OF DRUGS	PERCENTAGE (%)
1.	ANTIBACTERI	814	18.68
2.	ANTIFUNGAL	289	6.63
3	ANTIVIRAL	52	1.19
4	ANTHELMINTHIC	72	1.65
5	ANTIHISTAMINICS	856	19.64
6	STEROIDS	275	6.31
7	NSAIDS	133	3.05
8	EMOLLIENT	822	18.86
9	VITAMINS	789	18.10
10	OTHER DRUGS	255	5.90
Total		4357	100

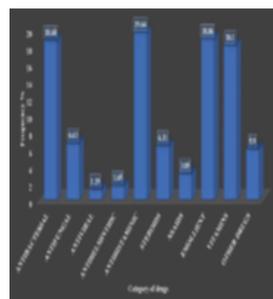


Table 1 shows that, out of total 4357 drugs prescribed to 1200 patients, (856, 19.64%) were Anti histaminic, followed by antibacterial (814, 18.68%), Antifungal (829, 6.63%), Steroids (275, 6.31%), antiviral (52, 1.19%), Anthelmintic (72, 1.65%), NSAIDS (133, 3.05%), Emollients (822, 18.10%), Vitamins (789, 18.10) and other drugs (255, 5.90%).

TABLE 2: PRESCRIBING FREQUENCY OF STEROIDS.

Steroids	Total No.	Prescribing frequency %	
		Among AFs (n=275)	As a Whole (n=4357)
Betamethasone	257	93.45	5.89
Clobetasol propionate	12	4.36	0.27
Triamcinolone Acetonide	6	2.19	0.15
Total	275	100	6.31

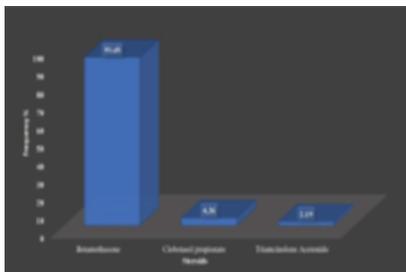


Table 2 shows that out of 275 Steroids, Betamethasone drugs was prescribed in highest number (257, 93.45%) followed by Clobetasol propionate (12, 4.37%).

OBSERVATION AND RESULTS:

By analyzing table 1, it was observed that out of total 4357 drugs prescribed to 1200 patients, (856, 19.64%) were Anti histaminic, followed by antibacterial (814, 18.67%), Antifungal (829, 6.63%), Steroids (275, 6.31%), antiviral (52, 1.19%), Anthelmintic (72, 1.65%), steroids (275, 6.31%). Similar results were reported in study by Pathak AK et al in which more widely prescribed drug for skin diseases was Antihistaminics (24.13%), followed by antifungal (21.02%), antibacterial (15.91%), steroids (13.01%). In a study by Patil A most prescribed drug out of 334 drugs prescribed was Antihistaminics (75, 22.46%), followed by Antifungals (69, 20.66%), Glucocorticoids (43, 12.47%), Antibiotics (37, 11.08%). Contrasting results were seen in study by Gupta S et al 25in which Antifungal drugs (403, 19.4%) were most prescribed out of 2076 drugs, followed by antibacterials (360, 17.6%), H1 Antihistaminics (330, 15.9%), Corticosteroids (195, 9.4%). The finding of the present study may be due to the fact that in skin diseases common signs and symptoms are itching problems and stabilization of mast cells which require administration of antihistaminic. In the present study NSAIDS (133, 3.05%), Emollients (822, 18.10%), Vitamins (789, 18.10) were prescribed in large numbers. Contrary results were seen in many studies as in study by Gupta S et al in which out of 2076 drugs, NSAIDS were prescribed in 33, 1.6% prescriptions, while in study by Bylappa BK et al in which out of 100 prescriptions, Emollients were prescribed in 23 (23%) of prescriptions. In a study by Patil A et al, Vitamin supplements were prescribed in 22 (6.59%) prescriptions and Emollients were prescribed in 14 (4.19%) prescriptions out of total 334 prescriptions. The reason for use of Emollients is that these Emollients, or moisturizers, help to keep the skin moist and supple by reducing water loss from the epidermis, the outer layer of skin. While vitamins A, E act as antioxidants and help in fast recovery of skin lesions.

From the table 2, it can be observed that Betamethasone was most commonly prescribed steroid (93.45%) followed by Clobetasol propionate (4.36%). The results are similar with the study done by Lamani VL et al in which betamethasone 53% (471/889) was the most commonly used topical corticosteroid. Similar results were also reported in study by

Rathi SK et al which showed that betamethasone 58.8% was the commonest topical corticosteroid prescribed. In a study by Saraswat A et al, Betamethasone is most commonly prescribed steroid. And in study conducted by Kumar J et al, betamethasone (30) was the most common steroid prescribed in combination with Salicylic acid. In various studies different results were shown as compared to the present study. One of such study was conducted by Sharma S et al in which Mometasone furoate (34%) was most commonly prescribed steroid, followed by Betamethasone valerate (33%). In a study by Mukherjee, et al, most commonly prescribed steroids were clobetasol (44%), followed by betamethasone dipropionate (25%), mometasone (12%) respectively. In a study conducted by Patil A et al, Clobetasol was the most common Topical steroid prescribed.

DISCUSSION:

From these prescriptions, the information on demographic profile of patients, diagnosis and treatment were collected and tabulated.

1. Distribution of prescriptions on the basis of gender and age groups.
2. Identification of trend: Polypharmacy and average number of drugs per prescription.
3. Various categories of drugs (antibiotics, antihistaminic, anti-fungal, steroids and other drugs) prescribed and its frequency.
4. Number of antibiotics prescribed per prescription.
5. Most commonly prescribed drug and its frequency.

Among all Antihistaminics, Chlorpheniramine was prescribed in highest number (441, 51.51%), followed by Levocetirizine (322, 37.61%).

Clotrimazole was prescribed in highest number (136, 47.05%), followed by Fluconazole (74, 25.60%).

Among 275 steroids, Betamethasone drug was prescribed in highest number (257, 93.45%) followed by Clobetasol propionate (12, 4.37%).

Among the most commonly prescribed drugs in whole study the Chlorpheniramine was prescribed in highest number 441 (10.14%), followed by Levocetirizine 322 (4.39%).

Among various dosage forms used, most frequently used dosage form was tablets (2671, 61%) times followed by cream (1003, 23%). Betamethasone was the most common steroids prescribed, followed by Clobetasol propionate.

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