

Topical steroids awareness and abuse among medical students in Jazan

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Abstract:

Background

Topical steroids are considered to be one of the most

frequently abused drugs. Only a few studies tackled this

problem in the Gulf area.

Objectives

To investigate topical steroids awareness and abuse among

medical students in Jazan.

Subjects and methods

A cross-control study was conducted using an anonymous web-based questionnaire. A total of 364 patients from Saudi Arabia took part in this survey.

Participants were asked to fill an anonymous questionnaire about their age, sex, their awareness about topical steroids and reasons for using them. Data about the common adverse events experienced were also collected.

Results

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This survey included a total of 346 participants, of which 71% were females. The mean age for the participants was 24.7 \pm 4.2 years old. Less than half of the participants (n=152, 41.8%) used topical steroids mainly for pigment disorders (n=52, 36.11%) and acne (n=48, 33.33%). The most common adverse events reported by participants were

acneiform, erythema, hyperpigmentation and infection as reported in 20 participants each, with a percentage of 13.16%.

Results also showed that 26.32% of patients who were taking topical steroids were self-medicated.

Conclusion

In order to achieve the optimum treatment outcome, it is very important to highlight the possible complications for topical steroids abuse and misuse.

Additional studies should be conducted to investigate topical steroids awareness and abuse.

Keywords

Steroids, Topical, Abuse, Awareness, Medical.

Introduction

Topical steroids are considered to be one of the most widely used medications for dermatologic therapy^{1, 2}. At the same time, abusing or misusing topical steroids is deemed to be a common problem with them adding new complications as it was reported in a number of studies^{3, 4}.

Many studies have been conducted around the world to investigate the different patterns of topical steroids prescribing and usage^{5, 6}. However, data on the Gulf region are still limited.

The most common side effects experienced by patients using topical steroids are localized to sites of application⁷.

Materials and Methods

Subjects:

A cross-control study was conducted using an anonymous web-based questionnaire. A total of 364 patients from Saudi Arabia took part in this survey.

Participants were asked to fill an anonymous questionnaire about their age, sex, if they were using topical steroids, which

preparations they were using and for how long they were using them. Data about the common adverse events experienced were also collected.

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Data collected:

The questionnaire consisted of 11 questions. The first two questions were about age and gender. The third question was "Did you use topical steroids before?", if the answer was "yes", then the participant is required to answer the following 8 questions;

1. Which type of preparation in topical steroids you usually use?
2. What is the type of Topical Corticosteroids you used to use?
3. How long do you use steroids?
4. What is the frequency of Topical Corticosteroids application?
5. What is your source of information about topical steroids?

6. What is your chief complain of topical corticosteroids?

7. Why do you use corticosteroids?

8. What is the common adverse effects of Topical
Corticosteroids?

Statistical analysis:

Data were statistically described in terms of frequencies (number of cases) and valid percentages for categorical variables. Mean, standard deviations, minimum and maximum were used to describe numerical variable. All statistical calculations were done using computer program IBM SPSS (Statistical Package for the Social Science; IBM Corp, Armonk, NY, USA) release 21 for Microsoft Windows.

Results

Data collected showed that the mean age for the participants was 24.7 ± 4.2 years old. With a maximum age of 52 years and minimum age of 19 years old.

		Statistic	Std. Error	
Age	Mean	24.706	.2293	
	95% Confidence Interval for Mean	Lower Bound	24.255	
		Upper Bound	25.157	
	5% Trimmed Mean		24.225	
	Median		24.000	
	Variance		17.884	
	Std. Deviation		4.2289	
	Minimum		19.0	
	Maximum		52.0	
	Range		33.0	
	Interquartile Range		2.0	
	Skewness		4.000	.132
	Kurtosis		21.474	.264

It was found that the majority of participants were females (256, 71%) while 104 were males (28.8%).

Sex			
	Frequency	Percent	Valid Percent
Valid			

Female	256	70.3	71
Male	104	28.6	28.8
Total*	360	100.0	100.0
* 4 missing values.			

Participants were asked about their previous usage of topical steroids. 152 (41.8%) answered yes while 212 (58.2%) answered no.

Did you use topical steroids before			
	Frequency	Percent	Valid Percent
No	212	58.2	58.2
Valid Yes	152	41.8	41.8
Total	364	100.0	100.0

Participants were also asked types of topical steroids preparation they usually use. The most frequent type used was mild steroids as reported in 96 patients (63.16%). Triple combination and potent steroids were used by 32 (21.05%) and 24 (15.79%) participants respectively.

Which type of preparation in topical steroids you usually use				
	Frequency	Percent	Valid Percent	
Valid	Mild steroids	96	63.16	63.16
	Potent steroids	24	15.79	15.79
	Triple combination	32	21.05	21.05
	Total	152	100.0	100.0

Data collected showed that Betamethasone was the most frequent type used as reported in 48 (36.36%) participants, followed by Clobetasol (30.30%), Mometasone and Panderm in 20 (15.15%) participants each. Lastly, Dermovate in 4 (3.03%) participants.

What is the type of Topical Corticosteroids you used to use				
	Frequency	Percent	Valid Percent	
Valid	Betamethasone	48	31.58	36.36
	Clobetasol	40	26.32	30.30
	Dermovate	4	2.63	3.03
	Mometasone	20	13.16	15.15
	Panderm	20	13.16	15.15
	Total*	132	100.0	100.0
* 20 missing values.				

Regarding duration of topical steroids usage, it was found that the majority of the participants (108, 71.05%) used steroids for 6 months or less. 28 (18.42%) used steroids from 6 to 12 months, 12 (7.89%) continued to use steroids for more than 2 years and only 4 (2.63%) participants used steroids from one to two years.

How long do you use steroids			
	Frequency	Percent	Valid Percent
>2 Years	12	7.89	7.89
0-6 months	108	71.05	71.05
Valid 1-2 years	4	2.63	2.63
6 to 12 months	28	18.42	18.42
Total	152	100.0	100.0

As for frequency of topical steroids application, 80 (52.63%) participants were found to be using topical steroids once daily and 32 (21.05%) used steroids twice daily. Twenty four (15.79%), 8 (5.26%) and 8 (5.26%) participants were found

to be using steroids intermittently, once weekly and on alternate days respectively.

What is the frequency of Topical Corticosteroids application			
	Frequency	Percent	Valid Percent
Alternate days	8	5.26	5.26
Daily once	80	52.63	52.63
Daily twice	32	21.05	21.05
Intermittently	24	15.79	15.79
Weekly once	8	5.26	5.26
Total	152	100.0	100.0

Pharmacies were found to be the main source of information about topical steroids as reported in 44 (28.95%)

participants, closely followed by self-medication as reported in 40 (26.32%) participants. Thirty two (21.05%) reported that beauticians were their source of information about topical steroids, 20 (13.16%) and 16 (10.53%) referred to advertisement and relatives/friends respectively to be their source about topical steroids.

What is your source of information about topical steroids			
	Frequency	Percent	Valid Percent
Advertisement	20	13.16	13.16
Beautician	32	21.05	21.05
Pharmacy	44	28.95	28.95
Relatives/friends	16	10.53	10.53
Self	40	26.32	26.32
Total	152	100.0	100.0

Participants were asked about their chief complain for that they used topical steroids, and the following was revealed;

Dry facial skin and diffuse facial redness with hotness were the most frequent chief complains reported as found in 32

(21.05%) participants each. Burning /itching, Papular rash without pustules and Papulopustular lesions were reported in 16 (10.53%) participants each. Twelve (7.89%) participants reported using topical steroids for rebound phenomenon and 28 (18.42%) participants used topical steroids for no clear reason.

What is your chief complain of topical corticosteroids				
	Frequency	Percent	Valid Percent	
Valid	Burning /itching	16	10.53	10.53
	Diffuse facial redness with hotness	32	21.05	21.05
	Dry facial skin	32	21.05	21.05
	Nothing	28	18.42	18.42
	Papular rash without pustules	16	10.53	10.53
	Papulopustular lesions	16	10.53	10.53
	Rebound phenomenon	12	7.89	7.89
	Total	152	100.0	100.0

Fifty two (36.11%) participants used topical steroids for pigment disorders, 48 (33.33%) used them for acne, 24 (16.67%) for their whiteness effect and 20 (13.89%) participants used steroids as fairness cream.

Why do you use corticosteroids				
	Frequency	Percent	Valid Percent	
Valid	Whiteness effect	24	15.79	16.67
	Acne	48	31.58	33.33
	Fairness cream	20	13.16	13.89
	Pigment disorder	52	34.21	36.11
	Total*	144	100.0	100.0
* 8 missing values.				

Participants were also asked if they experienced adverse events during or after using topical steroids and the following was revealed;

Acneiform, erythema, hyperpigmentation and infection were reported in 20 participants each, with a percentage of 13.16%. Atrophy and telangiectasia were reported in 16 participants each, with a percentage of 10.53%.

Hypertrichosis was reported in 8 (5.26%) participants and lastly hypopigmentation was reported in 4 (2.63%)

participants. Twenty eight (18.42%) participants stated that they do not know whether they had adverse events or not.

What is the common adverse effects of Topical Corticosteroid				
	Frequency	Percent	Valid Percent	
Valid	Acneiform	20	13.16	13.16
	Atrophy	16	10.53	10.53
	Erythema	20	13.16	13.16

Hyperpigmentation	20	13.16	13.16
Hypertrichosis	8	5.26	5.26
Hypopigmentation	4	2.63	2.63
I don't know	28	18.42	18.42
Infection	20	13.16	13.16
Telangiectasia	16	10.53	10.53
Total	152	100.0	100.0

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Discussion

The aim of this survey was to investigate topical steroids awareness and abuse among medical students in Jazan.

A total of 364 patients from Saudi Arabia took part in this survey.

The significant relief of symptoms from using topical steroids preparations led to types of abuse by both non specialists and patients⁸, that is why it was important to investigate the different patterns of topical steroids prescribing and usage.

Our results showed that Betamethasone and Clobetasol were the most frequent types used as reported in 36.36% and respectively 30.30% of the participants. Numerous studies reported similar results regarding Betamethasone^{9, 10, 11, 12}, however, regarding Clobetasol, different percentages were reported in the same studies¹².

Around three quarters (71.05%) of the steroids users used steroids for 6 months or less. Around half of the steroids users (52.63%) were found to be using topical steroids once daily.

Both findings were similar to a study conducted in India by Inakanti et al., as it showed that 77.7% used topical steroids for 3-6 months and the majority of cases applied daily once (37%)

Numerous studies named the main source of recommendation or prescription⁹⁻¹², but in our study, pharmacies were found to be the main source of information about topical steroids as reported

in 44 (28.95%) participants, closely followed by self-medication as reported in 40 (26.32%) participants. Thirty two (21.05%) participants reported that beauticians were their source of information about topical steroids.

Our results showed that dry facial skin and diffuse facial redness with hotness were the most frequent chief complains reported as found in 32 (21.05%) participants each. However, many studies stated that acne was the most chief complain reported⁹⁻¹².

Fifty two (36.11%) participants used topical steroids for pigment disorders, 48 (33.33%) used them for acne, 24 (16.67%) for their whiteness effect and 20 (13.89%) participants used steroids as fairness cream.

Acneiform, erythema, hyperpigmentation and infection were reported in 20 participants each, with a percentage of 13.16%, followed by atrophy and telangiectasia as they were reported in 16 (10.53%) participants.

Conclusion

In order to achieve the optimum treatment outcome, it is very important to highlight the possible complications for topical steroids abuse and misuse.

Additional studies should be conducted to investigate topical steroids awareness and abuse.

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