

Challenges and barriers to start isotretinoin in acne patients

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RESEARCH

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ABSTRACT

Background

The awareness of patients with acne about the side effects of isotretinoin is an important factor to reduce non-compliance with isotretinoin therapy, especially with long-term use.

Aims

The objective was to assess gender-specific awareness and concerns of isotretinoin among patients with acne.

Methods

A cross-sectional survey study was conducted among acne patients of both genders attending dermatology outpatient clinics at a tertiary care hospital.

Results

A total 356 acne patients were included in the current analysis. The average age was 23.6 ± 5.8 years. More than half of the patients (57.6 per cent) were females and the majority (79.5 per cent) were single. The majority of the patients were aware of isotretinoin (79.1 per cent) and its side effects (63.0 per cent). The most frequently recognized side effect was dryness (55.1 per cent), followed by teratogenicity (28.5 per cent), disturbance of lipid profile

(9.3 per cent), and finally constipation (7.0 per cent). Compared to males, females were more likely to know and to be concerned about the teratogenic side effect of isotretinoin ($p=0.022$ and $p<0.001$, respectively). The most important source of information about isotretinoin was physician (61.9 per cent), followed by patients (13.9 per cent), friends (8.8 per cent), and finally internet (8.1 per cent).

Conclusion

The awareness of specific isotretinoin side effects among a group of young Saudi patients with acne was suboptimal. Females were more likely to be aware of and concerned about the teratogenic side effect isotretinoin. The majority of our patients prefer to receive isotretinoin information from trusted official sources. The findings highlight the dermatologist role in health education and counselling on acne and its treatments.

Key Words

Acne vulgaris, isotretinoin, therapy, side effects, awareness, Saudi Arabia

What this study adds:

1. What is known about this subject?

As expected, female patients were more aware of and concerned about the teratogenic side effect isotretinoin

2. What new information is offered in this study?

The majority of our patients prefer to receive isotretinoin information from trusted official sources. The findings highlight the dermatologist role in health education and counselling on acne and its treatments.

3. What are the implications for research, policy, or practice?

The awareness of specific isotretinoin side effects among a group of young Saudi patients with acne was suboptimal so education is a very essential for acne patients.

Background

Acne vulgaris is a very common chronic inflammatory

dermatosis affecting up to 85 per cent of adolescents and young adults, with more than 20 per cent of the patients have moderate to severe disease.¹ In Saudi Arabia, studies showed that more than half of the University students have acne.^{2,3} As acne can be complicated by skin scarring and pigmentation, it can have a negative impact of the body image, especially at the time the adolescent is undergoing major physical, intellectual and emotional transformations.^{4,5} This may leads to psychological problems such as depression, anxiety, and low self-esteem.^{4,5} Additionally, it can negatively impact the quality of life.⁶ The challenges facing acne patients place pressure on dermatologists to provide an effective and safe treatment, especially for patients with severe acne.⁷

There are several medications used for the treatment of acne.^{8,9} Oral isotretinoin which is a vitamin A derivatives is considered one of the most effective treatments for acne vulgaris.¹⁰ Oral isotretinoin is usually used to treat severe and refractory cases that are not responsive to traditional treatments, such as antimicrobials, hormones, and topical treatments.⁸ Additionally, low-dose isotretinoin is frequently used to treat mild to moderate grades of acne.¹¹ However, several side effects of isotretinoin have been reported including; skin dryness, elevated liver enzymes, disturbed blood lipids, depression, and teratogenicity.^{10,12} Although not very common, these side effects may force the patient to stop isotretinoin therapy.¹² Therefore, the awareness of the patients with these side effects is an important factor to reduce non-compliance with isotretinoin therapy, especially with long-term use.¹³

The objective of the current study was to assess the awareness, concerns, and use of isotretinoin among patients with acne attending dermatology clinic. Additionally, to explore whether gender is playing any role in such awareness.

Method

Setting

The current study was done at the dermatology outpatient clinics at tertiary care hospital. It is governmentally funded and provides free medical care. On average, the dermatology outpatient clinics serve approximately 300 patients per day

Design and population

It was a cross-sectional survey study done among acne patients of both genders attending the dermatology outpatient clinics during June 2017. Ethical approval was obtained from the local research ethics committee. There

were no exclusions based on the type, the severity, or the duration of the disease.

Data collection and recruitment

The study questionnaire was created by the study investigators. It included questions about the demographics of the patients as well as the awareness and use of isotretinoin. All consecutive acne patients attending the dermatology outpatient clinics during the study period were invited to join the study and to explain the study objectives. Filling the questionnaire was considered as approval to join the study. Out of 593 patients approached, 356 completed the study questionnaire (response rate of 60 per cent)

Statistical analysis

Categorical variables were presented as frequencies and percentages. Continuous variables were presented as means and standard deviations (SD). Chi-squared test or Fisher's exact test, as appropriate, were used to compare the awareness and use between males and females. All P-values were two-tailed. A p-value <0.05 was considered as significant. Statistical Package for the Social Sciences software (SPSS Version 25.0. Armonk, NY: IBM Corp) was used for all statistical analyses.

Results

A total 356 acne patients were included in the current analysis. As shown in Table 1, the average age was 23.6±5.8 years. More than half of the patients (57.6 per cent) were females and the majority (79.5 per cent) were single. More than half of the patients (51.4 per cent) had a university education, with few (17.4 per cent) had less than high school education.

Table 2 shows the awareness and use of isotretinoin among the study participants by gender. The majority of the patients were aware of isotretinoin (79.1 per cent) and its side effects (63.0 per cent). The most frequently recognized side effect was dryness (55.1 per cent), followed by teratogenicity (28.5 per cent), disturbance of lipid profile (9.3 per cent), and finally constipation (7.0 per cent). The majority (86.6 per cent) of the patients were ready to use isotretinoin. However, the side effects of the drug were a considerable concern for the patients (54.8 per cent), followed by the duration of therapy (35.6 per cent) and teratogenicity (9.6 per cent). Approximately 21.2 per cent of the patients were using isotretinoin at the time of the study. The majority of the patients had/thought side effects can interfere with your daily activities. Dryness of the lips and face were the most reported side effects. Compared to males, females were more likely to know and to be

concerned about the teratogenic side effect of isotretinoin ($p=0.022$ and $p<0.001$, respectively). Additionally, females were more ready to use isotretinoin ($p=0.002$) and less concerned about the impact of the side effects on their daily activities ($p=0.012$).

As shown in Figure 1, the most important source of information about isotretinoin in both genders was physician (49.6 per cent in males, 70.9 per cent in females, and 61.9 per cent in all patients), followed by patients (13.9 per cent), friends (8.8 per cent), and internet (8.1 per cent). Compared to males, females were more likely to get information from physicians rather than previous patients ($p<0.001$).

Discussion

The current study presents data about the awareness, concerns, and use of isotretinoin among a group of young Saudi attending dermatology clinic. Irrespective of gender, the awareness of specific isotretinoin side effects in our patients was suboptimal. This was consistent with previous studies done in Saudi Arabia that showed low awareness of acne and treatment.^{3,14} As expected, female patients were more aware of and concerned about the teratogenic side effect isotretinoin. As one-fifth of our patients were married, dermatologists are strongly encouraged to counsel female patients with acne about the teratogenic effects of isotretinoin and to provide advice on appropriate contraceptive methods.¹⁵ This may improve the safety of and compliance with isotretinoin use.¹⁵ However, in many situations dermatologists are not abiding with protecting against teratogenicity in their female patients.^{16,17}

Despite being a major safety concern, teratogenicity was not the main concern of our patients before starting the drug. Instead, dryness and duration of therapy were the main concerns. This may reflect the fact that approximately 80 per cent of our patients were single. On the other hand, the high concern about dryness may reflect the additional worry about facial appearance, which may affect daily activities and long-term use of the drug. Furthermore, the high concern about duration of therapy may be driven by higher risk of developing side effects.

Doctors were the primary source of information about isotretinoin in our acne patients. Unexpectedly, social media and internet which is extensively used by young Saudi were the least sources of information.¹⁸ Both finding may indicate that our patients, who were more educated than typical Saudi patients, prefer to receive isotretinoin information from trusted official sources.¹⁸ This put more emphasis of

the dermatologist role in health education and counselling on acne and its treatments.

Conclusion

In conclusion, the awareness of specific isotretinoin side effects among a group of young Saudi patients with acne was suboptimal. Compared to males, females were more likely to be aware of and concerned about the teratogenic side effect isotretinoin. The majority of our patients prefer to receive isotretinoin information from trusted official sources. The findings highlight the dermatologist role in health education and counselling on acne and its treatments.

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PEER REVIEW

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CONFLICTS OF INTEREST

The authors declare that they have no competing interests.

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ETHICS COMMITTEE APPROVAL

Ethical approval was obtained from the local research ethics committee

Table 1: demographics of the study participants

Characteristics	Value*
Age in years (mean±SD)	23.6±5.8
Gender	
Male	151 (42.4%)
Female	205 (57.6%)
Marital status	
Single	283 (79.5%)
Married	73 (20.5%)
Educational level	
Primary school or less	17 (4.8%)
Intermediate school	45 (12.6%)
High school	111 (31.2%)
University	183 (51.4%)

* Number (percentage) unless mentioned otherwise

Table 2: Awareness and use of isotretinoin among the study participants by gender*

Characteristics	Males	Females	Total	P-value
Did you hear of isotretinoin?				
Yes	114 (78.1%)	159 (79.9%)	273 (79.1%)	0.682
No	32 (21.9%)	40 (20.1%)	72 (20.9%)	
Do you know the drug side effects?				
Yes	99 (68.8%)	116 (58.9%)	215 (63.0%)	0.062
No	45 (31.3%)	81 (41.1%)	126 (37.0%)	
What side effects do you know?				
Dryness	57 (59.4%)	61 (51.7%)	118 (55.1%)	0.022
Teratogenicity	18 (18.8%)	43 (36.4%)	61 (28.5%)	
Disturbance of lipid profile	12 (12.5%)	8 (6.8%)	20 (9.3%)	
Constipation	9 (9.4%)	6 (5.1%)	15 (7.0%)	
Do you think you are ready to use it?				
Yes	111 (79.9%)	181 (91.4%)	292 (86.6%)	0.002
No	28 (20.1%)	17 (8.6%)	45 (13.4%)	
What are your concerns before starting the drug?				
Side effects in general	60 (51.7%)	100 (56.8%)	160 (54.8%)	<0.001
Teratogenicity	0 (0.0%)	28 (15.9%)	28 (9.6%)	
Duration of therapy	56 (48.3%)	48 (27.3%)	104 (35.6%)	
Are you currently using isotretinoin?				

Yes	29 (21.6%)	42 (20.9%)	71 (21.2%)	0.870
No	105 (78.4%)	159 (79.1%)	264 (78.8%)	
Did you have/think side effects can interfere with your daily activities?				
Yes	81 (72.3%)	86 (57.3%)	167 (63.7%)	0.012
No	31 (27.7%)	64 (42.7%)	95 (36.3%)	

* Number (percentage), p-value were derived from chi square

Figure 1: Sources of information about isotretinoin among the study participants by gender
P<0.001

