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RESEARCH ARTICLE

IMPACT OF PSORIASIS ON QUALITY OF LIFE IN EASTERN PROVINCE, SAUDI ARABIA.

Ali Ahmed Alabdullah^{1,3}, Mousa Jafar Alhaddad^{2,3}, Yousef Ahmed Alabdullah^{1,3}, Ali Mohammed Aljafar^{1,3}, Mohammed Saleh Alhaddad¹, Hassan Ali Alnasser¹, Ahmed Eissa Aleissa¹, Fatimah Hassan Alturaifi¹, Esra Omar Alakloby², Manar Mutlag Alharthi², Lama Ibrahim Aloraini¹ and Omar Mohammed Alakloby⁴.

1. Medical Intern, Imam Abdulrahman bin Faisal University, Saudi Arabia.
2. Medical Student, Imam Abdulrahman bin Faisal University, Saudi Arabia.
3. These authors contributed equally to this work as the co-first authors.
4. Professor of Dermatology, King Fahd Hospital of the University, Imam Abdulrahman bin Faisal University, Dammam, Saudi Arabia.

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Abstract

Background: Psoriasis is a chronic, inflammatory skin disease that can seriously impair the quality of life (QoL). It can cause anxiety and result in disability negatively influencing life activities and social relationships of patients.

Objective: The aim of this study is to assess the quality of life in psoriatic patients living in the Eastern Province of Saudi Arabia.

Materials And Methods: The study was a cross-sectional questionnaire-based study. The Arabic version of Dermatology Life Quality Index (DLQI) instrument was used to assess the quality of life in the study. An electronic copy of the questionnaire was distributed to every psoriatic patient who visited the dermatology department, King Fahd Hospital of the University in Al-Khobar from September 2016 to March 2017.

Results: 84 adult patients accepted to participate in the study and completed the questionnaire. The overall average DLQI score was 7.39 out of 30. Psoriasis impaired the quality of life of 74 (88.1%) patients. 18 (21.4%) patients were "very largely" or "extremely largely" affected by the disease. Groin involvement was the single statistically significant factor that correlates with QoL. The patients with groin involvement (27.38%) had a marked impairment of the quality of life when compared to the patients with no groin involvement. The mean DLQI score with groin involvement is 9.87 compared to 6.37 without groin involvement (p-value = 0.013).

Conclusion: The overall score of DLQI in psoriatic patients living in Saudi Arabia remains high though it might be lower than assumed. The factors that are associated with QoL impairment in Saudi Arabia may differ from those in other countries of the world. Patients with groin involvement, for example, might have a higher impairment of QoL.

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Introduction:-

Psoriasis is a chronic lifelong inflammatory skin disease that is estimated to affect about 2% of the population worldwide. (Stern et al., 2004; Gelfand et al., 2005) In Saudi Arabia, it is the most frequent papulosquamous disorder accounting for 1.5% to 5.3% of all newly diagnostic cases of skin diseases. (Shelleh and Al-Hatit, 2004; Alakloby, 2005) Doctors and patients differ in their assessments of severity of this disease because doctors focus on the severity of skin lesions and the response to therapy. (Krueger et al., 2000; Finlay, 2005) From the patient's point of view, on the other hand, psoriasis is considered severe if it causes embarrassment or anxiety, if it affects relationships and everyday activities such as work, study, or sport, or if it causes disability as a result of joint involvement. (Finlay, 2005) Psoriasis is also associated with lack of self-esteem, an increased prevalence of depression and a greater likelihood of suicide. (Krueger et al., 2001; Golpour et al., 2012; Singh et al., 2017) Thus, the impact on quality of life (QoL) represents an important assessment measure of the severity of this chronic disease. It is therefore crucial that dermatologists include QoL measurements when they monitor the progress of psoriasis patients as the QoL of such patients may be underestimated by objective assessments of clinical severity. (Krueger et al., 2000; Finlay and Kelly, 1987)

The impact of psoriasis on the quality of life might differ between countries. Thus, each country needs to look for the extent to which psoriasis affects the QoL of its residents. There is a very limited amount of data in the literature about the assessment of the impact of psoriasis on the quality of life of patients living in Saudi Arabia .

Therefore, this study aims to assess the quality of life of adult psoriatic patients attending the outpatient dermatology clinics at King Fahd Hospital of the University in Al-Khobar, Saudi Arabia. It is hoped that the results will help in understanding patients' quality of life in Saudi Arabia and aid in the long-term improvement of patients' quality of life and their management in a nationwide scale.

Methods:-

The study was a cross-sectional questionnaire-based study. The validated Arabic version of Dermatology Life Quality Index (DLQI) instrument was used to assess the quality of life. An electronic copy of the questionnaire was distributed to every psoriatic patient who visited the dermatology department, King Fahd Hospital of the University in Al-Khobar from September 2016 to March 2017 through WhatsApp messages. Only patients of 16 years old or above were included in the study. The patients who were unable to speak or understand Arabic were excluded from it.

The DLQI is an instrument that is used to measure the QoL across all skin diseases. (Finlay and Khan, 1994) It has been validated, and used in both high- and low-income countries. (Basra et al., 2008) It is simple and brief, consisting of ten questions, each with four possible answers scored from 0 to 3, covering the last seven days of the patient's life. The DLQI is calculated as the sum of these scores, up to a maximum possible value of 30. The higher the total score is, the greater the impact of the disease. (Finlay and Khan, 1994) The content of the DLQI include all important and key concepts relevant to psoriasis-related symptoms and the impact of these symptoms on patients. (Shikhar et al., 2003; Safikhani et al., 2011) The instrument was used to evaluate the quality of life of psoriatic patients in many countries around the world including Turkey, Iran, and Malaysia. (Cakmur and Dervis, 2015; Rencz et al., 2015; Tang et al., 2013) The Arabic version has been used in Saudi Arabia to study the impact of many skin conditions on QoL including vitiligo and psoriasis. (Al Robaee, 2007; Al-Hoqail, 2009; Fatani et al., 2016)

In addition to the DLQI instrument, questions about age, gender, nationality, marital status, disease duration, age of onset, smoking, affected areas (e.g. scalp, nails, and joints), and comorbid conditions including depression were added to the electronic questionnaire.

All the participants were informed about the content and the aim of the study. Their participations were anonymous and voluntary.

The data was coded and entered into the SPSS software version 24. All quantitative variables were expressed as a mean \pm standard deviation. The relationships between quality of life and the possible related factors were examined using t-test. A P-value of less than 0.05 was considered to be statistically significant.

A free license has been granted to us to use the DLQI for the purposes of the study, and the ethical approval was obtained from the institutional review board at Imam Abdulrahman bin Faisal University (IAU). The authors have no conflicts of interest that are directly relevant to the content of this study.

Results:-

The number of patients who met the inclusion and exclusion criteria for the specific duration was 208. 36 patients did not have a WhatsApp contact number. 86 adult patients accepted to participate in the study and completed the questionnaire. 2 patients were excluded from the analysis because of not answering two or more questions in the DLQI. The remaining 84 patients were included in the analysis with a final response rate of 40.38%.

The mean age of patients was 37.0 years (SD=12.78). Their age range is between 17 and 73 years. The mean age of psoriasis onset was 22.62 years (SD=11.98). The disease duration ranged from 1 to 45 years (mean, 14.95 ± 11.48 years). 44 (52.38%) patients were female and 40 (47.62%) were males (male to female sex ratio 1:1.1). 78 (92.86%) patients were Saudis, and 6 (7.14%) were non-Saudi. Table 1 shows the details of the clinical and sociodemographic characteristics with relationship of each characteristic to DLQI scores. No significant relationship was identified. The overall average DLQI score was 7.39 out of 30 (SD=5.74) with a range from 0 to 26. As figure 1 shows, psoriasis impaired the quality of life in 74 (88.1%) patients: 17 (20.2%) patients were "very largely" (scored between 11 and 20) or "extremely largely" (scored between 21 and 30) affected by the disease. The effect was moderate (DLQI scores of 6-10) in 32 (38.1%) of patients and small (DLQI scores of 2-5) in 25 (29.8%). And, psoriasis has no effect at all in 10 (11.9%) patients (Fig.1). Symptoms & feeling and daily activities were the areas with most QoL deterioration. The aspect of life least affected by psoriasis was leisure. The detailed results of DLQI are shown in table 2.

Most common sites were scalp (75.0%), foot/legs (67.9%), elbows (56.0%), knees (54.8%), forearms (42.9%), hands/palms (41.7%) and face/forehead (41.7%). Table 3 demonstrates the sites of psoriatic lesions with the relationships to patients' DLQI scores.

Groin involvement was the single statistically significant factor that correlates with QoL. The patients with groin involvement (27.38% of patients) had a larger impairment of quality of life than the patients with no groin involvement. The mean DLQI score with groin involvement is 9.87 compared to 6.37 in the others (p-value <0.05). It appears that the quality of life differs in symptoms & feelings, daily activities and treatment parameters.

Table 1:- The sociodemographic and clinical characteristics of the participants (n=84).

Characteristics		p-value
Age [years]; mean \pm SD	37.02 \pm 12.78	.469
Age at onset [years]; mean \pm SD	22.62 \pm 11.98	.382
Duration of disease [years]; mean \pm SD	14.95 \pm 11.48	.806
Gender; n (%)		.605
Male	40 (47.62%)	
Female	44 (52.38%)	
Nationality; n (%)		.415
Saudi	78 (92.86%)	
Non-Saudi	6 (7.14%)	
Marital status; n (%)		.379
Single	24 (28.57%)	
Married	53 (63.10%)	
Divorced	5 (5.95%)	
Widow	2 (2.38%)	
Smoking; n (%)		.244
No	62 (73.81%)	
Current smokers	14 (16.67%)	

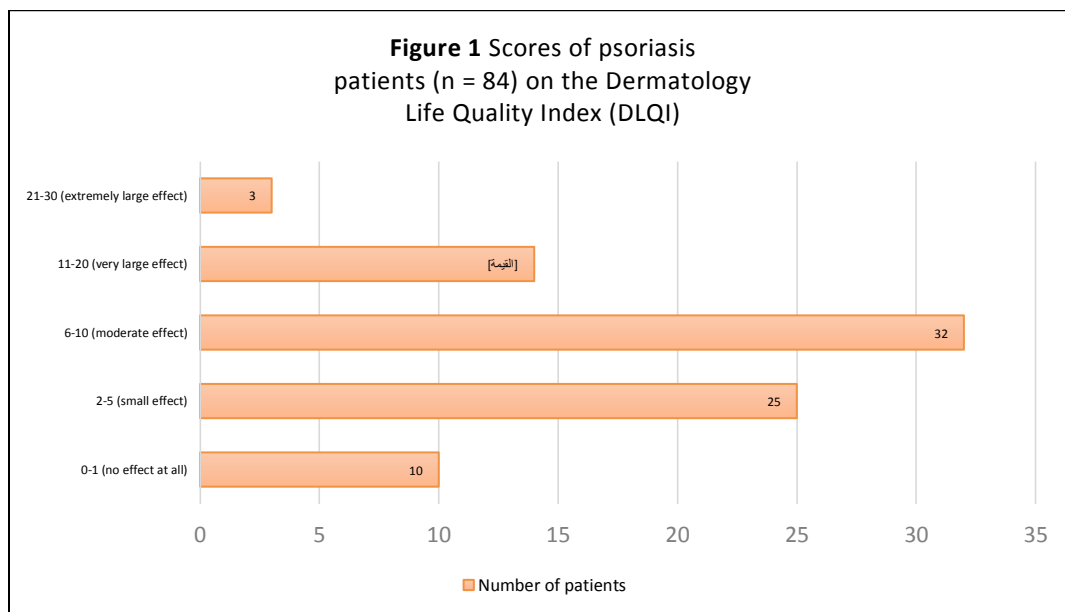
Quitted smoking	8 (9.52%)	
Other chronic disease; n (%)		.501
Yes	57 (67.86%)	
No	27 (32.14%)	
Psychiatric disease [depression]; n (%)		.530
Yes	2 (2.38%)	
No	82 (97.62%)	

Table 2:- Detailed results of DLQI sections.

Area	n (%)	p-value
Scalp	63 (75.0%)	.664
Foot/legs	57 (67.86%)	.204
Elbows	47 (56.0%)	.052
Knees	46 (54.76%)	.110
Forearms	36 (42.86%)	.083
Hand/palm	35 (41.67%)	.658
Face/forehead	35 (41.67%)	.128
Nails	28 (33.33%)	.117
Groin	23 (27.38%)	.013*
Ankles	19 (22.62%)	.494
Neck	15 (17.86%)	.336
Armpit	11 (13.10%)	.241

Table 3:- Site of psoriatic lesions.

Dimensions	Questions	Maximum Score	Average Score
Symptoms and feelings	1 and 2	6	2.37 (39.48%)
Daily activities	3 and 4	6	1.60 (26.71%)
Leisure	5 and 6	6	0.94 (15.67%)
Work and School	7	3	0.68 (22.62%)
Personal relationships	8 and 9	6	1.10 (18.27%)
Treatment	10	3	0.71 (23.81%)



Discussion:-

The present study revealed that psoriasis has negative impacts on patient's QoL in Eastern Saudi Arabia. This result is in accordance with the results of previous studies. (Al-Mazeedi et al., 2006) The mean DLQI score for all patients was 7.39 out of 30 (the higher the score, the more impairment in QoL). Interestingly, this result indicates a lower impairment of QoL than what was found in many similar previous studies that were conducted both locally and internationally. The average DLQI scores for psoriatic patients in Morocco, Turkey, and Iran were 12.7 (n=176), 11.59 (n=100) and 8.0 (n=62), respectively. (Cakmur and Dervis, 2015; Rencz et al., 2015; Khoudri et al., 2013) This emphasizes the fact that diseases in general differ in their impacts on QoL between one region and another.

In Saudi Arabia, a study that was conducted in King Fahad Medical City, Riyadh in 2006 revealed that papulosquamous disorders –including psoriasis- were the most disabling skin conditions and were of the highest mean DLQI score of 15.28. (Al-Hoqail, 2009) The study did not look for psoriasis specifically, and the sample size for each subgroup of skin lesions was small. Therefore, it is not clear whether our result reflects a true improvement of the QoL of psoriasis patients in Saudi Arabia in the past 10 years or not. A more recent study evaluated the QoL of patients with psoriasis at Hera General Hospital in Makkah in 2015. (Fatani et al., 2016) The study reported a mean DLQI score of 10.67 ± 5.54 which is higher than the mean DLQI score of this study. The percentage of patients with severe psoriasis -as defined by a DLQI score of more than 10 (Hongbo et al., 2005)- is also apparently higher than their percentage in our study (54.4% vs 20.2%). In both studies, however, the DLQI section for symptoms and feelings had the highest score indicating that it is the domain with the largest impairment of QoL.

Groin involvement was associated with a higher impairment of QoL. It is suggested that psoriasis has sexual impact, especially if it involves the groin. Sexual activity was affected in 31.6% of psoriasis patients in Kuwait. (Al-Mazeedi et al., 2006) This percentage is closely similar to that in patients with groin involvement in this study, but other studies did not establish any association between groin involvement and QoL. On the other hand, while other studies found an association between nail/scalp involvement and QoL, no association was found in this study. (Cakmur and Dervis, 2015; Nyunt et al., 2013)

Though they were not consistent in the literature, observations that linked age, disease duration, gender and smoking to QoL of psoriatic patients has been documented in many studies. (Cakmur and Dervis, 2015; Zachariae et al., 2004; Samponga et al., 2006; Abolfotouh et al., 2012). However, our study did not support these associations.

The current study had some limitations. Firstly, the study was carried out in a single center which only covers a proportion of the vast area of Saudi Arabia. Secondly, all participants were managed in a tertiary hospital with no involvement of other levels of healthcare like primary healthcare centers. In addition, the hospital is operated by a university which possibly makes it different from the governmental hospitals that are run by the Saudi ministry of health and the hospitals in the private sector. Lastly, the sample size was relatively small, and the response rate was lower than what we aimed to.

The DLQI is a simple tool that is very useful in assessing the QoL of psoriatic patients and their response to treatment. (Mazzotti et al., 2003; Lebwohl et al., 2009) Its use in routine clinical settings should be encouraged. A study of 64 consultations where the DLQI was used found that 37 (57.8%) of these consultations influenced the clinicians' treatment decisions. (Salek et al., 2007) It is advisable that every clinician should know that a DLQI score of more than 10 correlates with severe psoriasis, and that a change of DLQI scores between visits of 4 or more is significant. (Finlay, 2005, Hongbo et al., 2005)

Conclusion:-

The overall score of DLQI in psoriatic patients living in Saudi Arabia remains high though it might be lower than assumed. The factors that are associated with QoL impairment in Saudi Arabia may differ from those in the other parts of the world. Patients with groin involvement, for example, might have a higher impairment of QoL.

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