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Clinical pattern of psoriasis in patients seen at our private clinic, in Aden, Yemen

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A B S T R A C T

Background: Psoriasis is a chronic immune-mediated systemic disease that is influenced by genetic and environmental factors. Objective: To presents the demographic characteristics, and clinical variants of psoriatic patients. Materials and methods: Present work was a retrospective and observational study, conducted in patients of a private clinic of dermatology, in Almansoora, Aden, Yemen. All patients who attended the clinic during the period January 2018 to December 2021 and were diagnosed as psoriasis patients were included in this study. Data were collected and entered in a computer, and analyzed by using SPSS version 17. Results: The study patients were 168. They were (57.1%) males and (42.9%) females, with a male-to-female ratio of 1.3:1. The age of the patients ranged between 10 to 58 years. The mean age of the patients was 38.2 ± 12.6 years. The age group 41 – 50 had the highest number of patients 54 (32.1%), followed by the age group 31 – 40 years 40 (23.8%) years. The mean duration since the onset of the disease is 6.1 ± 4.6 years. The most common psoriasis type was plaque psoriasis (vulgaris) (65.4%). Family history related to psoriasis was positive among (20.2%) patients. Diabetes mellitus and hypertriglyceridemia were found equally among the study patients, each one in (9.5%) and arterial hypertension was found in (7.2%) patients. The involvement of nails was observed in (31%) of patients and Koebner phenomena was found in (23.8%) of patients. Conclusion: Psoriasis is predominant in male patients, with a male-to-female ratio of 1.3:1, and the most common psoriasis type was plaque psoriasis.

1.0 Introduction

Psoriasis is a chronic immune-mediated systemic disease that is influenced by genetic and environmental factors, is associated with comorbidities, and has a negative impact on the quality of life of affected individuals (Lowes et al., 2007, Friedewald et al., 2008). It can occur at any age, and is most common in the age group 50–69 (IHME., 2012). The reported prevalence of psoriasis in countries ranges between 0.09% (Gibbs., 1996) and 11.4% (Danielsen et al., 2013), making psoriasis a serious global problem. The etiology of psoriasis remains unclear, although there is evidence for genetic predisposition (Harden et al., 2015). Many studies have demonstrated that patients with psoriasis may have an increased risk of non-cutaneous diseases, including arterial and venous occlusive diseases. Changes in the plasma lipid composition may be the reason for increased risk of atherosclerosis in psoriasis (Seckin et al., 1994). Psoriasis has a strong genetic component but environmental factors play an important role in the presentation of this disease (Lønnberg et al., 2016). Psoriasis affects approximately 2.0% to 3.0% of the world's population (Springate., 2017). To date, epidemiological studies have demonstrated variable prevalence among different populations and ethnic groups worldwide. Higher prevalence rates were found in Western countries; the distribution ranges from 2.2% in the United Kingdom (Seminara et al., 2011) to as high as 4.5% in Norway (Olsen et al., 2005). The prevalence of psoriasis among patients in the United States was 2.2% to 3.15% (Kurd & Gelfand., 2009), while lower rates were observed in Latin Americans, Indians, Africans (Parisi et al., 2013), and in Asia at

less than 0.5% (Rachakonda et al., 2014). Psoriasis involves the skin and nails and is associated with a number of comorbidities. Skin lesions are localized or generalized, mostly symmetrical, sharply demarcated, red papules and plaques, and usually covered with white or silver scales. Lesions cause itching, stinging and pain. Between 1.3% (Bedi., 1995) and 34.7%, (Pariser et al., 2015) of individuals with psoriasis develop chronic, inflammatory arthritis (psoriatic arthritis) that leads to joint deformations and disability. The current study aimed to present the demographic characteristics, and clinical variants of psoriatic patients attending our dermatology clinic in Aden.

2.0 Materials and Methods

Present work was a retrospective and observational study, conducted in patients of a private clinic of Dermatology, in Almansoora, in Aden, Yemen. All patients attended our private clinic during the period January 2019 to December 2021 and diagnosed as psoriasis patients were included in this study. The diagnosis of psoriasis was depended mainly on history, clinical picture, skin biopsy for dermato-pathology examination, radiology in case of psoriatic arthritis. All data of sex, age, type of psoriasis, family history, duration from onset, associated diseases, nail involvement and Koebner's phenomena were collected. All data were entered in computer, and analyzed by using SPSS version 17. Descriptive statistics were presented as number and percentages for categorical variables. Mean with standard deviation (SD) was used for normally distributed data.

3.0 Results

During the period January 2019 to December 2021, a total of168 psoriasis patients were seen in our clinic and all of them were included in this study. They were 96 (57.1%) males and 72 (42.9%) females, with a male to female ratio 1.3:1 (Figure 1). The age of the patients ranged between 10 to 58 years. The mean age of the patients at initial diagnosis was 38.2 ± 12.6 years. For males, the mean age at initial diagnosis was 38.9 ± 13.4 years, and for females, it was 37.1 ± 11.6 years. The difference between means was not statistically significant ($p > 0.05$), as shown in Table 1. The age group 41 – 50 had the highest number of patients 54 (32.1%), followed by the age group 31 – 40 years 40 (23.8%), the age group > 50 years 36 (21.4%), the group 21 – 30 years 22 (13.2%) and the age group ≤ 20 years with 16 (9.5%). In addition, Table 1 showed the mean duration since the onset of the disease 6.1 ± 4.6 years.

Table 1: Distribution of sex, age and mean duration since disease onset (n=168)

Variables	No	%
Sex:		
Males	96	57.1
Females	72	42.9
Male to female ratio	1.3 : 1	
Age range (years):	10 – 58	
Mean age all patients:	38.2 ± 12.6	
Mean age males	38.9 ± 13.4	
Mean age females	37.1 ± 11.6	
p-value	> 0.05	
Age group (years):		
≤ 20	16	9.5
21 – 30	22	13.2
31 – 40	40	23.8
41 – 50	54	32.1
> 50	36	21.4
Mean duration since disease onset (years):	6.1 ± 4.6	

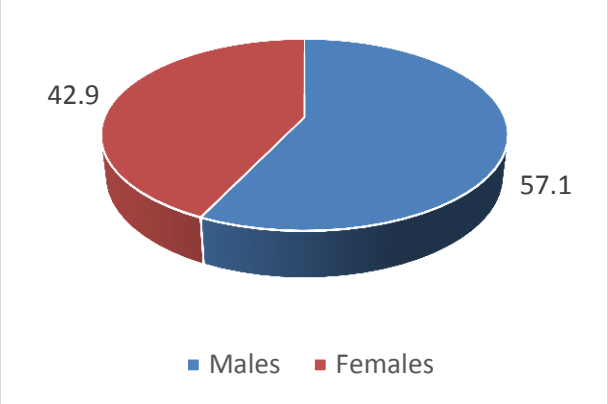

Figure 1: Distribution of patients related to sex

Table 2 reveals the distribution of various variables of the study patients. The most common psoriasis type was plaque psoriasis (vulgaris) 110 (65.4%) (Image 1) followed by palmoplantar psoriasis 22 (13.1%) (Image 2), guttate psoriasis 18 (10.7%) (Image 3), erythroderma psoriasis 8 (4.8%), scalp psoriasis 6 (3.6%) (Image 4) and pustular

psoriasis with 4 (2.4%) (Image 5). Family history related to psoriasis was positive among 34 (20.2%) patients. Three associated diseases were found among the study psoriasis patients. Diabetes mellitus and hypertriglyceridemia were found equally among the study patients, each one in 16 (9.5%) of the patients. In addition, arterial hypertension was found in 12 (7.2%) patients. The involvement of nail was observed in 52 (31%) patients and Koebner phenomena was found in 40 (23.8%) patients.

Table 2: Distribution of various variables of the study patients (n=168)

Variables	No	%
Type:		
Plaque psoriasis(vulgaris)	110	65.4
Palmoplantar psoriasis	22	13.1
Guttate psoriasis	18	10.7
Erythroderma psoriasis	8	4.8
Scalp psoriasis	6	3.6
Pustular psoriasis	4	2.4
Family history:		
Positive	34	20.2
Negative	134	79.8
Associated diseases:		
Diabetes Mellitus	16	9.5
Hypertriglyceridemia	16	9.5
Arterial hypertension	12	7.2
None	124	73.8
Nail involvement:		
Positive	52	31.0
None	116	69.0
Koebner phenomena:		
Positive	40	23.8
None	128	76.2

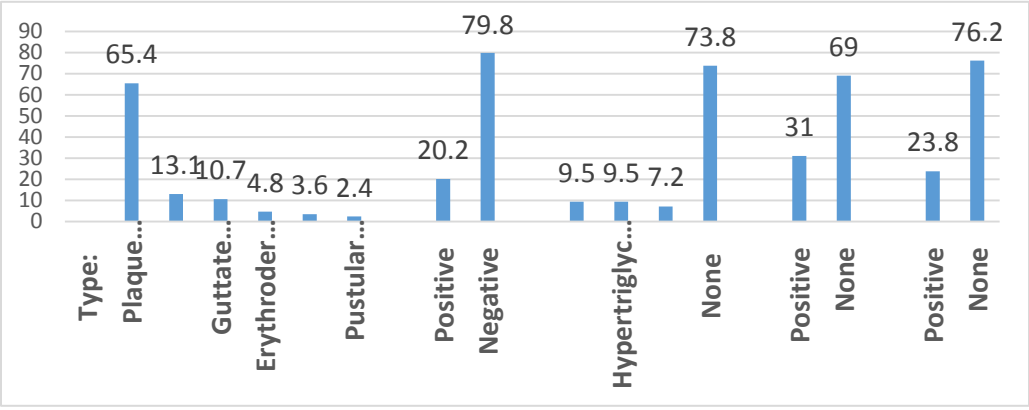

Figure 2: Proportions of various variables of the study patients

Image 1: Plaque psoriasis

Image 2: planter psoriasis

Image 3: Guttate psoriasis

Image 5: Pustular psoriasis

4.0 Discussion

Psoriasis is a chronic lifelong inflammatory skin disease that is estimated to affect about 2% of the population worldwide (Pariser et al., 2015, Gelfand et al., 2005). It is a critical public health problem since it has a significant impact on quality of life and has financial ramifications. Even though psoriasis is not contagious, patients may face significant social stigmatization and psychological problems as a result of its disfiguring and debilitating effects, including loss of productivity and, worst of all, social rejection. Furthermore, psoriasis is considered a significant health condition that requires care because of related comorbidities, particularly cardiovascular complications (Parisi et al., 2020). In the current study, we found males predominant at (57.1%) while females were (42.9%), with a male-to-female ratio of 1.3:1. Our finding was similar to that reported by other studies that males predominant were observed in a study from Egypt (El-Komy et al., 2020) with (56%), from Nepal (Mikrani & Shrestha., 2014) with (53.7%), and from Malaysia (Affandi., 2018) with (55.7%). In contrast, a female predominance was reported by Egeberg et al (Egeberg et al., 2017) from Denmark (53.2%). Boehncke et al (Boehncke & Schon., 2015) mentioned that psoriasis is considered equally prevalent in both sexes. In our present study, we found the age of the patients ranged between 10 to 58 years. The mean age of the patients at initial diagnosis was 38.2 ± 12.6 years. Our finding of patients' mean age was less than that reported from Saudi Arabia 45.53 ± 15.3 years (Alamri et al., 2022). We found in our present study the age group 41 – 50 had the highest number of patients 54

(32.1%), followed by the age group 31 – 40 years 40 (23.8%), the age group > 50 years 36 (21.4%), the group 21 – 30 years 22 (13.2%) and the age group ≤ 20 years with 16 (9.5%). Psoriasis can occur at any age. While some studi indicated the average age of onset for psoriasis was 33 years of age, and 75% of cases occurred before 46 years of age (Nevitt & Hutchinson., 1996), others suggested that the onset of psoriasis was bimodal with two peaks of the disease – the first between 16 and 22 and the second between 57 and 60 years of age (Henseler & Christophers., 1985). In the current study, we found the mean duration since the onset of the disease 6.1 ± 4.6 years. Fatema et al (Fatema et al., 2021) reported that psoriasis disease duration of <5 years was mostly seen (62%). Mean duration in early onset psoriasis and late onset psoriasis were 6.7 ± 6.53 years and 3.58 ± 3.26 years, respectively. In the present study, we found the most common psoriasis type was plaque psoriasis (vulgaris) 65.4%) followed by palmoplantar psoriasis (13.1%). Alzeer et al (Alzeer et al., 2022) reported in their study that plaque psoriasis is the most frequent form in the major regions of Saudi Arabia with a prevalent rate reaching 87%. In the southern regions of Saudi Arabia, guttate psoriasis is more predominant (Alhumidi., 2013, Shajeri & Al-Fahaad., 2014). Guttate psoriasis in our study represented the third psoriasis type with (10.7%). Alzeer et al (Alzeer et al., 2022) reported that guttate psoriasis is the second most common form of psoriasis in the majority of Saudi research. Our findings are to some extent similar to other studies that have quoted a high incidence of plaque psoriasis (Parisi et al., 2013, Al-Qassimi et al., 2020). We found in our study, family history related to psoriasis was positive among (20.2%) of patients. A positive family history of psoriasis has been considered a risk factor for the development of the disease (Sanclemente et al., 2022). A higher percentage of positive family history (31.8%) was reported by Sanclemente et al (Sanclemente et al., 2022). Also, higher percentages have been reported in Chile and Spain (Valenzuela et al., 2011, Ferrandiz et al., 2002). In the current study, 3 associated diseases were found among the study psoriasis patients. Diabetes mellitus and hypertriglyceridemia were found equally among the patients, each one in (9.5%) of the patients. Psoriasis was reported to be associated with type 2 diabetes (Goolam-Mahyoodeen., 2019). In our study, we found the involvement of nails was observed in (31%) of patients and the Koebner phenomenon was found in (23.8%) of patients. Nail lesions have been reported for about 90% of psoriatic patients (Dogra & Arora., 2014). Isolated nail psoriasis may be developed independently from inflammatory arthritis and skin psoriasis in 1-10% of psoriatic patients (Dogra & Arora., 2014, Schons et al., 2014). Koebner phenomenon is highly associated with nail psoriasis (Schons et al., 2014).

5.0 Conclusion

Psoriasis is predominant in male patients, with a male to female ratio of 1.3:1, and the most common psoriasis type was plaque psoriasis (vulgaris) followed by palmoplantar psoriasis. Further studies are needed to determine the incidence and prevalence of psoriasis in Aden governorate and the surrounding governorates

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