International Journal of Research in Dermatology
Velappan R et al. Int J Res Dermatol. 2019 Aug;5(3):452-456
http://www.ijord.com

DOI: http://dx.doi.org/10.18203/issn.2455-4529.IntJResDermatol20192068

Original Research Article

Current scenario in clinical trends of psoriasis in tertiary care hospital

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Received: 07 April 2019
Revised: 20 April 2019
Accepted: 23 April 2019

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ABSTRACT

Background: Psoriasis is a common papulosquamous chronic, recurrent inflammatory skin disease with genetic predisposition and environmental factors acting as triggers. The current prevalence of common dermatoses will be useful for giving appropriate treatment for the patients. The aim of the study is to determine the different clinical pattern and prevalence of psoriasis in our institution.
Methods: This study is a hospital-based descriptive study. We included 400 self-reporting patients of age group 6-87 years with psoriasis who attended our skin OPD. Period of study was 3 months from January 2019 to March 2019 in our medical college situated in Chengalpattu, Tamil Nadu.
Results: Chronic plaque psoriasis is the most common (63.2%) clinical pattern observed irrespective of age and sex. Scalp and Nail involvement were common. Co-morbidities associated include diabetes mellitus, hypertension, alcoholism, hypothyroidism, and depression.
Conclusions: Our data correlates with previous hospital-based prevalence studies of psoriasis.

Keywords: Subungual hyperkeratosis, Koebner phenomenon, Comorbidities

INTRODUCTION

Psoriasis is a common papulosquamous chronic, recurrent inflammatory skin disease with genetic predisposition and environmental factors acting as triggers. The word Psoriasis came from Greek word Psora which means scale.[1] It is a long standing disease associated with many morbidities and has an impact on the psychosocial aspects. There are a number of emerging population-based studies providing worldwide prevalence estimates of psoriasis. According to published reports, prevalence in different populations varies from 0% to 11.8%.[2-5] Prevalence of psoriasis varies in different parts of world. So we can not rely on Western data. The exact prevalence of psoriasis in our country is not known and so the information on prevalence would be helpful for planning strategies for better management. This point prevalence study was undertaken to determine the current epidemiological pattern of psoriasis. In this above situation, our hospital-based study was conducted.

METHODS

The study was a descriptive study on 400 self-reported patients who attended Dermatology Outpatient Department at Chengalpattu Medical College situated in Tamil Nadu, South India. It was conducted during a period of 3 months from January 2019 to March 2019. We enrolled all patients without any exclusion based on sex, nationality, occupation or socioeconomic status. All the details were noted including age, sex, age of onset of lesions, duration and pattern of skin lesions, associated diseases, provocative factors, blood investigations like complete blood count, blood sugar levels, thyroid function test and urine analysis. All the patients were subjected to relevant investigations based on symptoms

to rule out other co morbidities. Clinical diagnosis of psoriasis was made by detailed history, clinical examination and biopsy when needed. Data collected were analysed using descriptive analyses for co-morbidities, types of psoriasis, scalp, nail and joint involvement, age of onset, provocative factors and associated skin conditions.

RESULTS

Prevalence of psoriasis

Among the total number of patients attended during this period in the Dermatology Outpatient Department of Chengalpattu Medical College, about 400 patients were diagnosed to have psoriasis. It comes to about 2.6% of total number (15,427) of new cases.

Sex ratio

Of the total 400 patients with psoriasis 279 were males and 121 were females (Male: Female ratio was 2.3:1).

Figure 1: Classic plaque type with silvery white scales.

Figure 2: Palmoplantar psoriasis.

Clinical pattern

Chronic plaque psoriasis (Figure 1) was the most common type. It involved about 212 patients, i.e. about 53% of the total patients. The second most common was palmoplantar (Figure 2), which constitutes about 127 patients i.e. 31.8%, then scalp about 37 cases 9.2%. The remaining genital (Figure 3), flexural (Figure 4), erythrodermic (Figure 5), guttate (Figure 6), nail (Figure 7) and pustular constitute less than 6%.

Figure 3: Genital psoriasis.

Figure 4: Flexural psoriasis with relatively less scaling.

Figure 5: Erythrodermic psoriasis.

Figure 6: Guttate psoriasis.

Figure 7: Nail psoriasis showing both nail pitting and subungal hyperkeratosis.

Age of onset

The most common age of onset is between 15 to 25 years, which is about 41.7% (167 cases) of the total cases. 21.2% cases are between 25 to 50 years of age (85 cases). 32.2% patients (129 cases) are above 50 years of age. Only 4.75% of patients (19 cases) are under 15 years of age in our study.

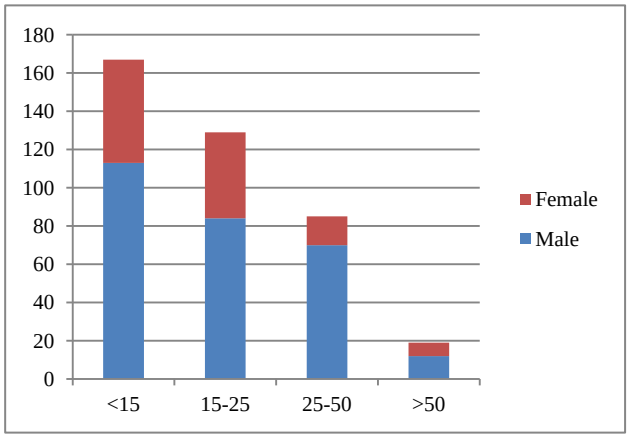

Figure 8: Age of onset.

Nail involvement

Finger nails were commonly involved than toe nails and 25% of the patients had nail involvement, which is similar to study conducted by Lewis et al.[6] The most common changes were pitting, which accounts for 75% of the nail involvement and subungual hyperkeratosis accounts for 45%. Both nail pitting and subungual hyperkeratosis (Figure 7) were seen in 20% of the patients. Other nail changes like splinter haemorrhages, leukonychia, oil drop sign, thickening of nail plate and onycholysis are seen in less than 5% of the patients. Nail involvement was seen in almost all patients with psoriatic arthritis.

Joint involvement

Joint involvement was seen in 7% of our psoriatic patients (28 cases), which is in concordance with the study conducted by Baker et al.[7] The most common joint involvement was oligoarthritis involving proximal interphalangeal joint (10 cases), distal interphalangeal involvement was seen in 9 cases, knee joint involvement was seen in 5 cases, and 2 patient had rheumatoid-like joint involvement.

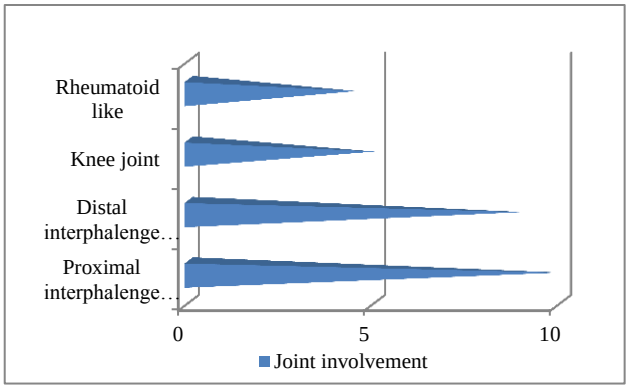

Figure 9: Joint involvement.

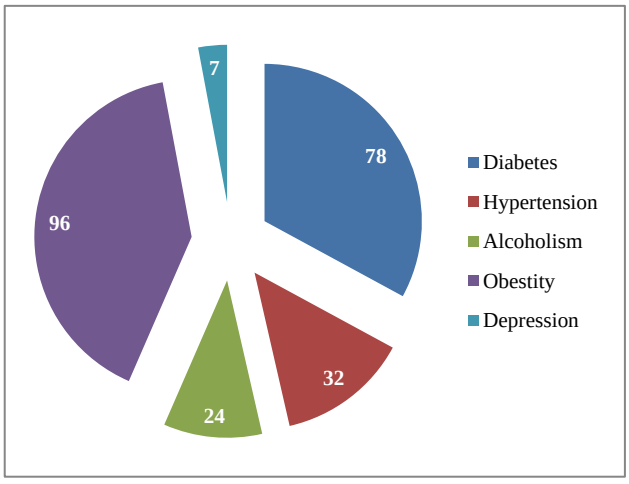

Figure 10: Comorbidities.

Comorbidities

19.5% had diabetes, 8% were hypertensive, 6% had habit of alcohol intake, 3% had coronary artery disease. 1.25% had hypothyroidism. About 23% patients were obese, and 1.75% patients were taking treatment for depression.

Associated skin conditions

Autoimmune skin conditions like vitiligo, lichen planus and alopecia areata were seen in 17, 8 and 5 patients respectively. Infective skin diseases like wart was seen in 5 patients and herpes zoster had occurred in 2 patients with psoriasis; 1 psoriatic patient had bullous pemphigoid.

Provocative factors

8% (32 patients) had history of drug intake before the onset of psoriasis (15 had ACE inhibitors, 11 had native treatment, 4 had NSAIDS and other 2 had antimalarials); 6 patients had fever and infection, 8 patients had history of trauma previous to the onset of psoriasis. Sunlight and pregnancy were noted as triggering factors in 4 and 3 psoriasis patients respectively. Flexural psoriasis had localised triggers like dermatophytosis in 2 patients.

DISCUSSION

Psoriasis is a common papulosquamous chronic, recurrent inflammatory skin disease with genetic predisposition and environmental factors acting as triggers. The skin cells mature and are shed from the skin's surface every 28 to 30 days.[7] When psoriasis develops, the skin cells mature quicker in 3 to 6 days and move to surface of skin. Instead of being shed, the skin cells pile up causing the visible lesions. It is also found that genes that cause psoriasis determine how a person's immune system reacts. These genes can cause psoriasis or other immune-mediated conditions such as rheumatoid arthritis and type 1 diabetes.[8]

The characteristic lesion of psoriasis is well-defined erythematous indurated plaques with silvery white scales mainly involving lumbosacral area, bony prominences and extensor surface of extremities, which exhibits Koebner phenomenon (i.e. occurrence of isomorphic lesions along the line of trauma).[10] Koebner phenomenon indicates disease activity and severity. The removal of psoriatic scales (candle wax sign) with art of grattage usually reveals an underlying smooth, glossy membrane (Berkeley membrane) with pin point bleeding points where the thin supra-papillary epithelium is torn off (Auspitz sign).[11] However, this Auspitz sign is not sensitive or specific for psoriasis as it can also be seen in several non psoriatic, scaling disorders, including Darier's disease and actinic keratoses in which small bleeding points could be produced on forcibly removal of scales.[12]

From the available studies, the prevalence of psoriasis in India ranges from 0.44 to 2.8%.[8] The proportion of psoriasis out of all the skin diseases in our study was 2.6%. In our study males were affected more than females similar to other studies. We encountered Chronic plaque type as the most common type of psoriasis which correlates with Griffyhs et al study and many other similar studies. The most common age of onset is between 15 to 25 years which was also similar to other studies. Nail involvement is common in psoriasis and psoriatic arthritic patients and can even be the initial and the only site of involvement in some cases. Morphology of nail psoriasis depends on the parts of nail affected like nail matrix, nail bed or hyponychium. Our study showed nail changes in 25%, which is in concurrent with the study by Bedi et al.

The most common joint involvement was oligoarthritis involving proximal interphalangeal joint. Rheumatoid factor was negative in almost all patients with joint involvement. Skin lesions preceded arthritis in almost all our psoriatic patients.

Our patients have diabetes (19.5%), hypertension (8%), alcoholism (6%), coronary artery disease (3%), hypothyroidism, depression which was similar to Basko-Plluska et al study. Psoriasis increases the risk of obesity. A study from UK showed higher adjusted odds of obesity in patients with severe psoriasis (OR=1.8) than in patients with mild psoriasis (OR=1.3) compared with patients without psoriasis. Vice versa, obesity is linked to psoriasis due to its chronic proinflammatory state as postulated by Basko-Plluska et al.[9]

Other autoimmune diseases like vitiligo, lichen planus, bullous pemphigoid and alopecia areata were also associated in our psoriatic patients. These autoimmune diseases were identified during the course of the disease but they did not interfere with the course of the psoriasis. Infective diseases like wart cellulitis and herpes zoster also occurred during the course of psoriasis and they caused mild exacerbation of psoriasis. Native medicine, depot steroids and antihypertensive drugs were the main provocative factors for psoriasis in our patients.

CONCLUSION

Our study showed a similar clinical profile and outcome as our Indian psoriasis population. More research and detailed prospective and randomised controlled studies need to be done to delineate the natural course of the disease, which varies in different individuals and also according to the clinical pattern of the disease. In all cases of flexural psoriasis one should search for a localised trigger. Prevention of psoriasis has barely been studied. A prerequisite would be identifying and eliminating risk factors and triggers. Also there is need for a more effective targeted therapy for a better outcome. Usage of systemic steroids should be avoided as there is severe flare, or even development of life threatening generalised pustular psoriasis when steroids are tapered or stopped.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

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Cite this article as: Velappan R, Venu S, Ramasamy S, Chellappan L. Current scenario in clinical trends of psoriasis in tertiary care hospital. Int J Res Dermatol 2019;5:452-6.