ORIGINAL RESEARCH PAPER

Volume-8 | Issue-8 | August - 2019 | PRINT ISSN No. 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A STUDY OF CLINICO-HISTOPATHOLOGICAL CORRELATION IN PATIENTS OF PSORIASIS

Pathology

S. Srikanth — Professor, Department of Pathology, Malla Reddy Institute of Medical Sciences, Suraram, Hyderabad,Telangana,India

Pramod Kumar Pamu* — Assistant Professor, Department of Pathology, Nizams Institute of Medical Sciences, Hyderabad, Telanagana. *Corresponding Author

ABSTRACT

Introduction: Psoriasis is a chronic inflammatory cutaneous dermatosis with a genetic preponderance . It is characterised by complex mechanisms involving changes in the epidermal growth and differentiation.

Aims & Objectives: To compare the clinically diagnosed cases of psoriatic lesions subjected to histopathology either to confirm or to rule out Psoriasis.To establish the role of age, sex & environmental factors in causing psoriasis

Materials & Methods: This is a retrospective and prospective study in which clinical data of all patients with psoriasis who attended outpatient Department of Dermatology, for a period of one year were analyzed. Punch and incisional biopsies of size 0.5 to 1 cms were obtained from psoriatic lesions of patients, in the Department of Dermatology.They were submitted for histopathology and routine H&E staining (Hematoxylin and Eosin) .

Results: A total of 25 cases were selected in which 19 males and 6 females were present.22 cases were reported as Psoariasis and 3 cases were not Psoariasis.

Conclusion: Psoriasis is a common dermatological disease in India.Our data correlates with previous hospital-based prevalence studies of psoriasis.

KEYWORDS

Psoriasis, guttate,scaly lesions

INTRODUCTION

Psoriasis is a common chronic inflammatory dematosis affecting as many as 1% to 2% of people in the United States. Persons of all ages may develop the disease.Psoriasis is sometimes associated with arthritis , myopathy, enteropathy, spondylitic joint disease or the acquired immunodeficiency syndrome. Psoriatic arthritis may be mild or may produce severe deformities resembling the joint changes seen in rheumatoid arthritis. Psoriasis is a genetically determined immune-mediated inflammatory disease mediated by T-helper 1 (Th1)/Th17 T cells. With a prevalence of 0.44-2.8 per cent in India, it commonly affects individuals in their third or fourth decade with males being affected two times more common than females1. Psoriasis significantly impairs the quality of life of patients and their families resulting in great physical, emotional and social burden. Psoriasis is a genetically determined disease with environmental influences; ethnic differences are quite commonly expected involving all aspects of the disease from epidemiology, genetic susceptibility, clinical manifestations and response to treatment.

It has been pointed out in the WHO's recent Global Report on Psoriasis2 that there are many unmet research gaps in psoriasis addressing various aspects such as epidemiology, aetiology, association with comorbidities, treatment and ways to improve healthcare services.

MATERIALS & METHODS

The present study is a Retrospective and Prospective analytical study of histopathological features of psoriatic skin biopsies. Punch and incisional biopsies of size 0.5 to 1 cms were obtained from psoriatic lesions of patients.

They were submitted for histopathology and routine H&E staining (Hematoxylin and Eosin) . Clinical history was collected from all the patients and correlated.

RESULTS

For purpose of analysis, the lesions were divided into following groups:

Psoriasis Vulgaris ,Generalised pustular psoriasis and Localised pustular psoriasis.

In Psoriasis Vulgaris, 16 patients were reported with this, mounds of parakeratosis with neutrophils,thin granular layer,moderate acanthosis,focal spongiosis, and dilated blood vessels at the tip of dermal papillae. Of all the listed features, only the spongiform pustules of Kogoj and Munro microabscesses are truly diagnostic of psoriasis. [Figure 1]

In generalised pustular psoriasis, 4 cases were reported as this. It occurs as a macropustule and represents their characteristic histologic lesion.As the size of the pustule increases, the epidermal cells in the center of the pustule undergo complete cytolysis so that a large single cavity forms. They become pyknotic and assume the appearance of a large Munro abscess.

In localised pustular psoriasis, There are three types of localized pustular psoriasis:Psoriasis with pustules, localized acrodermatitis continua of Hallopeau and Pustular psoriasis of the palms and soles.

In the variants of localized pustular psoriasis, the histologic picture is the same as that described for generalized pustular psoriasis. In the present study highest incidence is in the age group 31-40 years and out of 25 patients there were 19 males and 6 females thus the male to female ratio was approximately 3:1. Lesions were first noted in scalp in 30% of patients and upper and lower extremities in 48% of cases in the present study .

In the present study 48% had no influence of season on their disease. 40% had exacerbation of their disease in winter, 10% during summer and 2% in rainy season.

DISCUSSION

Psoriasis on its own can be a serious disease and more than enough for someone to cope with, but when it is complicated by other diseases such as arthritis, heart attack, diabetes and psychology [3] making more adverse effect on health. It has been pointed out in the WHO's recent Global Report on Psoriasis that there are many unmet research gaps in psoriasis addressing various aspects such as epidemiology, aetiology, association with comorbidities, treatment and ways to improve healthcare services. It has been recommended that therapeutic researches should focus on options which can be applicable globally, on a large scale.

Psoriasis is a genetically determined disease with environmental influences; ethnic differences are quite commonly expected involving all aspects of the disease from epidemiology, genetic susceptibility, clinical manifestations and response to treatment. Current research on psoriasis in India focuses on identifying human leukocyte antigen (HLA) associations and genetic polymorphisms conferring psoriatic

risk amongst Indians and metabolic syndrome and cardiovascular risk amongst psoriatics[4]. We have recently reported that Th2 cytokine/regulatory T-cell gene polymorphism - interleukin-10 (IL-10) (rs1800871) polymorphism, Th1/Th17 cytokine polymorphisms - IL-12B (rs3212227) and IL-23R (rs2201841) polymorphisms, tumour necrosis factor alpha (TNF a) polymorphisms - TNFAIP3 (rs610604) and TNIP1 (rs17728338) polymorphisms confer increased risk of psoriasis, whereas Th-2 cytokine/regulatory T-cell gene polymorphism - IL-4 (rs2243250) polymorphism is protective against psoriasis in south Indian Tamil speaking population. Th1 pro-inflammatory cytokine genes' IL-2 [–330 (G/T)] single nucleotide polymorphism was associated with greater disease severity in our population.

HLA-C*06 allele was found to be positively associated with susceptibility to psoriasis, female gender and early onset of psoriasis in south Indian Tamil population . We also observed psoriasis to be associated with significantly lowered 25-hydroxy vitamin D levels and increased levels of ischaemia-modified albumin correlating with disease severity suggesting increased systemic inflammation and oxidative stress in psoriasis. Comprehensive lipid tetrad index, atherogenic index and lipid peroxidation have been reported to be surrogate markers for increased cardiovascular risk in psoriasis.

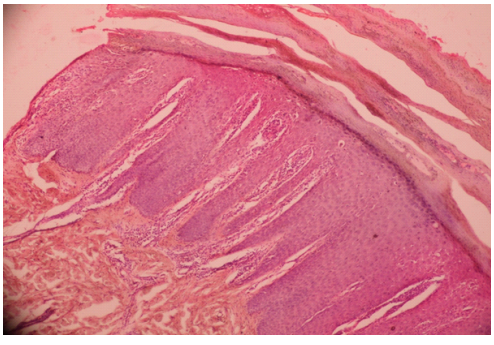
Studies done by Bedi T R[5] and Fatani MI[6] showed similar results like in our study in which number of cases diagnosed were males compared to females.

CONCLUSION

Despite the prevalence of psoriasis in Indian population and progress in research, India still lags behind in psoriasis research output. With the increasing prevalence and awareness of psoriasis and its association with various co-morbidities, there is ongoing need for research on various aspects of this disease related to epidemiology, aetiopathogenesis, management, co-morbidities, impact on quality of life, economic and societal burden and healthcare costs owing to the paucity of Indian data. Hence, well-conducted research in these areas specific to Indian population considering the differences in genetic makeup, environmental influences and health care costs would go a long way in improving the healthcare services for the affected patients in our country.

Figure legends:

Figure 1: Section showing skin tissue having Parakeratosis, hyperkeratosis, munromicro abscess, blunted rete peges which are classical findings of Psoriasis. [H&E, x 40].



REFERENCES

1. Dogra S, Yadav S. Psoriasis in India: Prevalence and pattern. Indian J Dermatol Venereol Leprol. 2010;76:595–601.
2. World Health Organization. Global report on psoriasis. [accessed on June 12, 2017]. Available from: http://www.apps.who.int/iris/bitstream/10665 /204417/ 1/ 97892 4156 5189_eng.pdf.
3. Indhumathi S, Rajappa M, Chandrashekar L, Ananthanarayanan PH, Thappa DM, Negi VS, et al. TNFAIP3 and TNIP1 polymorphisms confer psoriasis risk in South Indian Tamils. Br J Biomed Sci. 2015;72:168–73.
4. Indhumathi S, Rajappa M, Chandrashekar L, Ananthanarayanan PH, Thappa DM, Negi VS, et al. Investigation of association of the IL-12B and IL-23R genetic variations with psoriatic risk in a South Indian Tamil cohort. Hum Immunol. 2016;77:54–62.
5. Bede T R et al. Clinical profile of Psoriasis in North Inida. Indian J. Dermatol Venereol Leprol 1995;61:202-205.
6. Fatani M I, et al. Psoriasis in Eastern Saudi Arabia. Saudi Medical ournal 2002; 23(7): 213-217.