

CLINICOEPIDEMIOLOGICAL STUDY OF CHILDHOOD PSORIASIS PATIENTS AND ITS ASSOCIATION WITH HLA-CW6 IN A TERTIARY CARE CENTRE OF EASTERN INDIA

Dermatology

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ABSTRACT

BACKGROUND- Psoriasis is chronic common papulosquamous disorder. Its aetiology included various environmental and genetic factors. In genetics, HLA-Cw6 is most commonly associated with psoriasis. Childhood psoriasis is also common in worldwide population. However, very few studies done on epidemiological data and HLA-Cw6 analysis in childhood psoriasis patients.

AIMS AND OBJECTIVE- Clinicoepidemiological study of childhood psoriasis patients and its association with HLA-Cw6 in a tertiary care centre of Eastern India

MATERIAL AND METHOD- We conducted a cross-sectional study in a tertiary care centre and recruited 20 patients of psoriasis with age group below 18 years after taking proper consent. Clinical history and blood was taken from them and HLA-Cw6 analysis was done by PCR method. Data compilation was done by Microsoft excel using SPSS software.

RESULTS- A total of the 20 childhood psoriasis patients, 9 were males and 11 were females. Generalized plaque type psoriasis (N=19) is commonest followed by guttate psoriasis (N=1). None of the patients had arthralgia. Family history was present in only 3 patients. Higher numbers of childhood psoriasis patients (N=14) were positive for HLA-Cw6. Also Higher numbers of females (N=10) were positive for HLA-Cw6. five patients had nail changes.

CONCLUSION- We found HLA-Cw6 is strongly associated with childhood psoriasis and also HLA-Cw6 frequency is higher in female than male childhood psoriasis patients.

KEYWORDS

HLA-Cw6, Childhood psoriasis, PCR, Nail changes

INTRODUCTION

Psoriasis is chronic common papulosquamous disorder which has autoimmune and genetic aetiology. Psoriasis is also common in children. Very limited studies are available on childhood psoriasis.¹ There are different clinical presentation of childhood psoriasis including plaque psoriasis, guttate, erythrodermic and nail psoriasis. Plaque type of psoriasis is the most common.² Global prevalence of psoriasis is around 2% of which one third cases are of childhood psoriasis. Most studies shows girls are more commonly affected than boys.³ HLA-Cw6 association with psoriasis is well-known but there are few studies on HLA-Cw6 association with childhood psoriasis in the Indian population.⁴

AIMS AND OBJECTIVE

Clinicoepidemiological study of childhood psoriasis patients and its association with HLA-Cw6 in a tertiary care centre of Eastern India.

MATERIAL AND METHOD

A cross-sectional study was done in a tertiary care centre from 2014 to 2015. We recruited 20 clinically diagnosed psoriasis patient ages below 18 years in our dermatology outpatient department. Clinical history and consent were taken by appropriate method. We collected blood from each patient and DNA analysis for HLA-Cw6 done by PCR method. Exclusive palmoplantar psoriasis patients were excluded from study. Data compilation was done by Microsoft excel using SPSS software.

RESULTS

During study period, we enrolled 20 patients of psoriasis with ages below 18 years. In our study 9 were males and 11 were females as depicted in figure-1.

Childhood Psoriasis

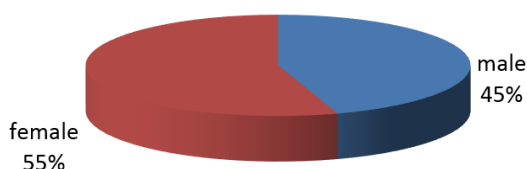


Figure 1: Sex distribution of childhood Psoriasis

19 children were had generalized plaque types of psoriasis and 1 had guttate type. None of the patients had arthralgia. Family history was present in 3 childhood psoriasis patients. 14 children were HLA-Cw6 positive while 6 children were negative for HLA-Cw6 as depicted in figure-2.

Childhood Psoriasis

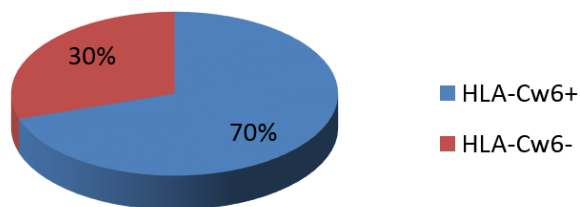


Figure-2 HLA-Cw6 percentage in Childhood psoriasis

Frequency of HLA-Cw6 according to male and female was depicted in figure-3.

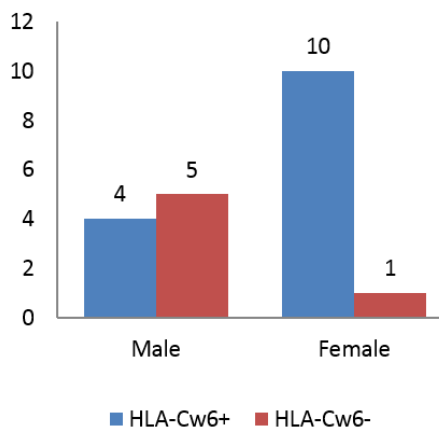


Figure-3 HLA-Cw6 association in Male and Female

HLA-Cw6 and nail changes association was showed in figure-4.

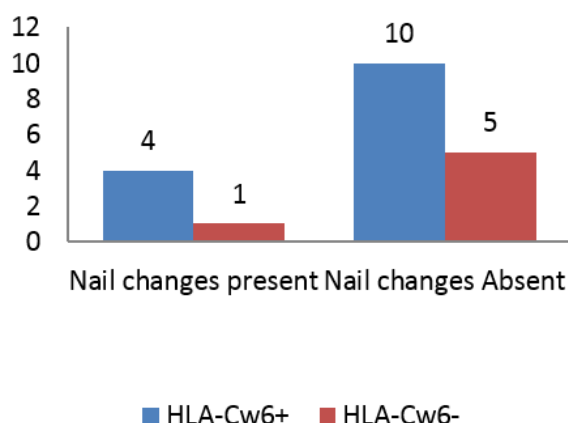


Figure-4 HLA-Cw6 association with nail changes

DISCUSSION

Psoriasis is papulosquamous disorder characterized by different clinical types. Psoriasis can affect any age groups from childhood to adults. We have done study on childhood psoriasis and association with HLA-Cw6 positivity.

In our study, we found females have higher percentage of disease involvement than males in childhood psoriasis. Similar studies were done by Yan Wu et al. and Al.Fouzan et al. in which female had higher percentage of psoriasis.^{5,6} Another study done by Nanda A et al. in Indian population showed equal sex distribution in childhood psoriasis patients.⁷

In our study, we found higher percentage of HLA-Cw6 positivity with childhood psoriasis patients. A study on Polish patients showed HLA-Cw6 allele strongly associated with juvenile psoriasis.⁸ However a study done by Sathishkumar D et al. On Indian population showed no difference in HLA-Cw6 positivity in childhood psoriasis patients.⁴

When, we study HLA-Cw6 association with respect to gender of psoriasis patients, we found females were more commonly associated with HLA-Cw6 positivity compared to male. Sathishkumar D et al. Found no difference in HLA-Cw6 positivity with Sex distribution.⁴

In our study, we found no significant association of HLA-Cw6 with respect to nail changes in childhood psoriasis patients. A study done by Sathishkumar D et al. showed similar results.⁴

CONCLUSION

HLA-Cw6 strongly associated with psoriasis in different studies. It is also associated with childhood psoriasis but very few studies are done. We found higher frequency of HLA-Cw6 seen in childhood psoriasis patients. We also found HLA-Cw6 frequency higher in females than male childhood psoriasis patients.

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