

Psoriasis in children: A study from the southern part of Saudi Arabia

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ABSTRACT

Objective: The aim of this study is to explore the features of psoriasis in children from 1-10 year old in southern part of kingdom of Saudi Arabia (Assir and Najran regions).

Subjects and Methods: The study included 50 patients with psoriasis retrospectively reviewed from October 2010 to April 2012. 28 patients were females(56%) and 22 patients were males(44%) with slight female predilection. Simple tabulations and Chi Square test was used for data analysis.

Results: The clinical features of psoriasis in children in southern part of K.S.A were: 1- Guttate psoriasis with 32 patients (64%) with 82% preceded by upper respiratory tract infection. 2-Plaque psoriasis with 16 patients (52%) with (12%) preceded by upper respiratory tract infection. 3- Inverse psoriasis with 2 patient (4%) with (0%) preceded by upper respiratory tract infection. All patients were treated only with topical treatment (Emollient plus Betamethasone) in the evening.

Conclusions: The study concluded that Psoriasis most often affects children at the age less than 10 years, the most common clinical form is Guttate psoriasis with 32 patients (64%) with 82% preceded by upper respiratory tract infection. The study recommends improving life quality of children with Psoriasis.

KEY WORDS: Plaque, psoriasis, guttate

INTRODUCTION

Annually about 20,000 children 10 years or less of age are diagnosed with psoriasis. Psoriasis is an inflammatory and proliferative disease, characterized by well-defined plaques covered by silvery scales that mainly appear on the extensor prominence and scalp.¹

Psoriasis is an autoimmune disease. Activation of T lymphocytes (TH1 and TH2) trigger cytokines which initiate proliferation of keratinocytes. These lead to increased secretion of cytokines which lead to increased proliferation of keratinocytes which later present clinically as psoriasis. So, keratinocytes mature more rapidly than normal and reaches the surface of the skin in a shorter period.²

The signs include pitting and discoloration of the nails, severe scalp scaling, diaper dermatitis or plaques similar to that of adult psoriasis on the trunk and extremities. Psoriasis in infants is uncommon, but it does occur. There are five types of psoriasis: plaque, guttate, inverse, pustular and erythrodermic. Plaque psoriasis is the most prevalent form of the disease. About 80 percent of patients with psoriasis have this type. It is characterized by raised, inflamed, red lesions covered by a silvery white scale. It is typically found on the elbows, knees, scalp and lower back.³⁻⁵

Guttate psoriasis is a form of psoriasis that often starts in childhood or young adulthood. This type of psoriasis appears as small, red, individual spots on the skin. Guttate lesions usually appear on the

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trunk and limbs. Guttate psoriasis often comes on quite suddenly. A variety of conditions can bring on an attack of guttate psoriasis, including upper respiratory infections, streptococcal throat infections (strep throat), tonsillitis, stress, injury to the skin and the administration of certain drugs including antimalarials.^{3, 6-9}

The etiology and exact pathogenesis of psoriasis is unknown; however, it is generally agreed that the disease has familial and hereditary involvement. Psoriasis may be inherited as an autosomal dominant and may be seen running in some families.¹⁰

The aim of the study is to examine specific clinical features of psoriasis, course in children, determine their significance during disease and present notification on childhood psoriasis from the south region of Saudi Arabia. This study will help to know more about the clinical pattern, characterizing the disease and treatment effectiveness of the disease in this region.

SUBJECTS AND METHODS

This retrospective study was conducted in Assir Central Hospital and King Khalid Hospital. The psoriasis cases were retrospectively reviewed for from October 2010 to April 2012. Children aged (1-10) were considered as study subjects. Data were collected from the hospitals records through a questionnaire containing the following variables: child age, gender, Clinical type of psoriasis, Nail involvement, hair involvement, Post strep. infection (history of sore throat), treatment and responses to treatment.

Results were presented as mean ± standard deviation, frequencies as well as percentages. Chi-Square test test was used to evaluate association between psoriasis age and gender of the children.

All statistical analyses was performed using the SPSS, version 17 (SPSS Inc., Chicago, IL, USA). P value less than 0.05 was considered statistically significant.

RESULTS

Table (1) shows the age and sex distributions of the children. The study involved 50 patients with psoriasis, 28 patients were females (56%) and 22 patients were males (44%) The mean age of the respondents was 6.5 years (SD = 2.15). The age distributions illustrated that the majority of the children were in the age groups (8-10) years. 38% of the children were in the age group (5-7) years while only 10% of them were less than 4 years.

Table 1 Gender and Age Distribution of the Children

Characteristics	No	%
Gender		
Male	22	44
Female	28	56
Age Groups		
2-4	10	20
5-7	19	38
8-10	21	42
Total	50	100

Table (2) provides information about the clinical types of psoriasis and its associations with gender and age groups. It is clear from the table that there was a significant association between gender and psoriasis. 89.3% of females were diagnosed as Guttate compared with only 31.8% of males. P. value of 0.067 indicates that there is no significant association between age and psoriasis. Fig. 1 shows the overall distribution of psoriasis, indicating children with Guttate were 64% compared to 32% with Plaque and only 4% with Inverse Psoriasis.

Table (3) illustrates Psoriasis patients according to the streptococcal infection and response to topical treatment. All Patients were treated only with topical treatment (Emollient plus Beta-methasone in the evening and Daivonex at night) for three week. The table suggest that 30 patients (94%) of Guttate psoriasis, 8 patients (50%) of Plaque psoriasis and 2 patients (100%) of Inverse psoriasis, got good response.

Table 2 Associations between gender, age and clinical types of psoriasis

Characteristics	Diagnosis			CHI Square/ P. Value
	Guttate Psoriasis	Plaque Psoriasis	Inverse Psoriasis	
Gender				CHI Square =17.91 Sig.= 000
Male	7(31.8)	13(59.1)	2(9.1)	
Female	25(89.3)	3(10.7)	0(0.0)	
Age groups				CHI Square = 2.631 Sig.=0.67
2-4	6 (60.0)	3 (30.0)	1 (10.0)	
5-7	13 (68.4)	5 (26.31)	1 (5.3)	
8-10	13(61.9)	8(38.1)	0 (0.0)	
Total	32(64.0)	16(32.0)	2(4.0)	

Table 3 Psoriasis patients according to the association to the streptococcal infection and response to topical treatment

Clinical Type	No. of Minimal Response Pt.	% of Minimal Response	No. of Good Response Pt.	% of Good Response	Post Strept. Infection
Guttate psoriasis	2	6%	30	94%	82%
Plaque psoriasis	8	50%	8	50%	12%
Inverse psoriasis	0	0%	2	100%	0%
Total	10	20%	40	80%	94%

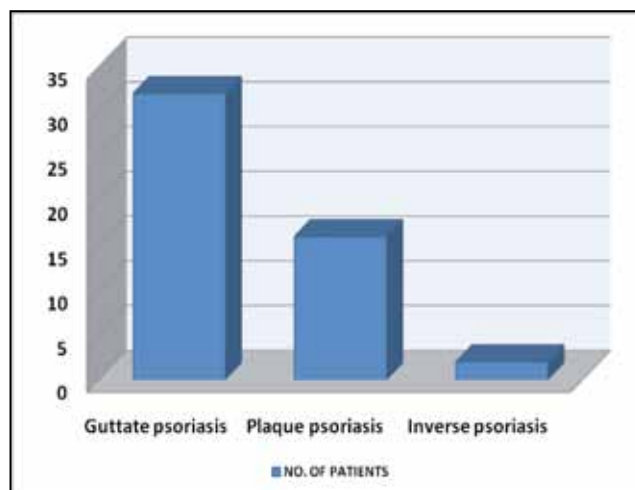


Fig. 1 Clinical types of psoriasis in children

DISCUSSIONS

Psoriasis is an idiopathic inflammatory disease that affect the skin, nails and scalp. It is characterized by silvery scaly plaques and papules. It has different types such as plaque, guttate inverse, gyrate, circinate, atrophic, follicular, nummular and geographic. We carried this investigations to explore the features of psoriasis in children (clinical type, age, sex predilection, association with upper respiratory tract infection and response to topical treatment). The clinical features of psoriasis in children in southern part of K.S.A were: Guttate psoriasis with 32 patients (64%) out of which 82% preceded by upper respiratory tract infection; Plaque psoriasis with 16 patients (52%) out of which 12% preceded by upper respiratory tract infection and Inverse psoriasis with 2 patient (4%) out of which 0% preceded by upper respiratory tract infection. This pattern is not different from elsewhere where psoriasis in childhood may sometimes differ from adult psoriasis in its presentation and treatment. About one out of 40 people have psoriasis, usually starting in young adulthood. Out of those, about 10 percent to 15 percent get psoriasis before the age of 10 years. Guttate Psoriasis appears to be the most common

type of psoriasis in children under ten years of age.¹⁰ Although this study is first one to be conducted in the Southern part of the KSA, the small sample size is the main shortcoming of this study.

CONCLUSIONS

We conclude from our study that, psoriasis most often affects children at the age less than 10 years, the most common clinical form is Guttate psoriasis with 32 patients (64%) with 82% preceded by upper respiratory tract infection. The study recommends improving quality of life of children with psoriasis.

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