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Research Article

**STUDY TO KNOW THE CUTANEOUS PRESENTATION IN
CHILDREN SUFFERED FROM SYSTEMIC LUPUS
ERYTHEMATOSUS**¹Dr. Sabika Rehman Alavi, ²Dr. Javed Iqbal, ³Dr. Jaweeria Allah Ditta¹RHC Dhounkal, Wazirabad Distt Gujranwala²Mayo Hospital, Lahore³District Headquarters Hospital, Rawalpindi**Abstract:**

Systemic lupus erythematosus (SLE) is an autoimmune disease which affects multi systems of the body. In two third of patients Cutaneous changes are observed.

Objectives: This study was held to evaluate the cutaneous findings in children suffering from Systemic lupus erythematosus.

Study Design: A Descriptive Study.

Place and Duration: In the Dermatology department of Mayo hospital, Lahore for one year duration from July 2017 to December 2017.

Patients and methods: Fifteen cases of SLE were selected for study from Dermatology department. The diagnosis was based on the criteria of the American Rheumatism Association. In a predefined manner Cutaneous changes were saved.

Results: Initial age was 14 years (93.3%) and 5-13 years in children. One newborn LE was observed. 8 (53.3%) were female and 7 (46.7%) were male. Malar rash, 10 (66.6%), 8 (53.3%), 6 (40%) common hair loss, 5 (33.3%) hyperpigmentation, 5 (33.3%) vascular lesions, 3 lesions (13.3%), bullous lesions 1 (6.7%), 1 (6.7%) 1 reticularis and rheumatoid nodules livedo mucosa. There were common squamous lesions as single NLE.

Conclusion: In children, cutaneous changes are distinct from adults. There is no female superiority in children. Vascular and Photosensitivity lesions were less common, whereas discoid eruption was rare. Raynaud's and Chilblain phenomenon and Peripheral gangrene were not observed. Neonatal LE was seen rarely.

Key words: LES, cutaneous findings, newborn LE.

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INTRODUCTION:

Systemic lupus erythematosus (SLE) is an autoimmune disease which affects multi systems of the body. In two thirds of cases Integument is affected. Skin changes are on fourth of the American Association of Rheumatology (ARA) criteria for SLE diagnosis. Adult women are usually affected by this disease. Childhood SLE is a rare condition with a frequency of 11-21 in 100,000 whites.

In Caucasian children the proportion of males is between 1: 4 and 6 to 18 years. It has been reported that all patients of SLE approximately 15-17% suffered from disease before 16 years of age. Rarely, babies born from lupus mothers can develop LE, called (NLE) neonatal lupus erythematosus, due to the passive maternal transfer of autoantibodies to the fetus. In 60-90% Cutaneous changes occurs in all types in children during the course of the disease at any time, but observed at the time of diagnosis in 60-78% of cases. For this reason, in SLE cutaneous changes recognition are very important in that it is potentially dangerously diagnosed early. Many local studies deal with SLE adult patients; However, there are very few data on this subject in Pakistani

children. This study was performed to determine the skin findings of SLE in children of Pakistan.

MATERIALS AND METHODS:

This descriptive Study was conducted in Dermatology department of Mayo hospital, Lahore for one year duration from July 2017 to December 2017. 15 children with SLE (diagnosed according to ARA criteria) were included in the study. A detailed physical examination and history was noted. Relevant biochemical and hematological, radiological studies, immunological profiles and skin biopsies were performed. Changes of the skin were specifically divided into subgroups (characteristic histopathologic changes of LE) and non-specific.

RESULTS:

During the 1 year duration, 16 patients, 14 SLE and one newborn LE were diagnosed. There were 8 female students (53.3%) and 7 boys (46.7%) and 1 female student (1.1 girls). In 14 children with SLE, the onset age was between 5 and 13 years. The frequencies of non-LE-specific lesions and LE-specific eruptions are shown in Tables 1 and 2, respectively.

Table 1 Frequency of different LE-specific lesions in 15 case of SLE.

<i>Lesions</i>	<i>n (%)</i>
Malar rash	10 (66.7)
Photosensitivity	8 (53.3)
Psoriasiform lesions of subacute LE	1 (6.7)

Mucosal ulcers (Figure 2), LE-specific malar eruption included (Figure 1) and light sensitivity. In 3 patients Oral mucosa was affected and 2 patients in the genital area (Table 3).

Table 3 Mucosal sites affected (n=15)

<i>Mucosae affected</i>	<i>n (%)</i>
Lips	3 (20)
Palate	3 (20)
Buccal mucosa	3 (20)
Genital mucosa	2 (13.3)

There was a generalized psoriasis rash as a single NLE (Fig. 3). A twenty four years-old mother first baby born who turned out to be anti-Ro antibodies positive. There were rash, temperature, heart disease and splenomegaly. Histopathology showed changes on slides which are compatible with LE. The baby was also anti-Ro positive.



Figure 3 Generalized psoriasiform eruption in the female infant with neonatal LE.



Figure 4 Bilateral purpuric eruption on the legs of a girl. Mild scaling is also evident.

Among the nonspecific lesions were the most common vascular findings (Figure 4).

The ratio of other lesions types is shown in Table 2.

Table 2 Distribution of different LE-nonspecific lesions	
<i>Lesions</i>	<i>n (%)</i>
<i>Vascular lesions</i>	
Telangiectasia	5 (33.3)
Microinfarcts	2 (13.3)
Purpura	2 (13.3)
Chronic ulcers	2 (13.3)
Bullous Erythema multiforme	1 (6.7)
Livedo reticularis	1 (6.7)
<i>Pigmentary changes</i>	
Hyperpigmentation	5 (33.3)
Hypopigmentation	1 (6.7)
<i>Hair changes</i>	
Diffuse alopecia	6 (40)
Lupus hair	1 (6.7)
<i>Others</i>	
Ragged cuticle	2 (13.3)
Ichthyosis	2 (13.3)
Sclerodactyly	1 (6.7)
Erythematous papules	1 (6.7)
Rheumatoid nodules	1 (6.7)

Chronic ulcer, Peripheral gangrene, Raynaud's or chilblains phenomenon were not observed.

DISCUSSION:

This study confirms the high frequency of skin changes in SLE patients. However, since all the cases have been obtained in distant dermatology clinics, the ratio was reported to be 4%, 100% in our diet.

Second, you can see a variety of skin changes. We noticed gender in equality, malaria eruption was the most common observation. With previous reports this is in accordance. Malar debris is present in 31-81% of patients and 22-60% of the cases at diagnosis.



Figure 2 Ulcers over lips and buccal mucosa. Face and neck is also affected.



Figure 1 Malar rash, photosensitive generalized maculopapular eruption and non-cicatricial alopecia in a child with SLE.

The malar eruption incidence increases with the disease progression. Nine photosensitivity cases in our study were rare. Similarly, discoid lesions do not occur in any one of our patients. Font et al Table 4 shows the skin changes comparison in our patients. The variations between the two may be because of different racial roots.

In the single NLE patient the psoriasiform eruption observed was consistent with the literature. This means that in the presence of systemic features in a baby, psoriasis spillage should be taken seriously. Table 5 compares skin changes in children with Pakistani adults selected for the study. Discoid lesions are more frequent when compared to adults, malaria debris, photosensitivity and vascular lesions when they are more tightly packed.

CONCLUSION:

Our conclusions are that children's skin changes are

different from those observed in adults. There is no female superiority in children. Photosensitivity is less visible. Discoid eruption is not common. Chronic ulcer, Raynaud's, Peripheral gangrene and chilblains phenomenon were not observed. In neonates LE is a rare condition.

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