**ABSTRACT**

Erythroderma in children is an uncommon, yet striking entity with an incidence of 0.11%. Psoriatic erythroderma accounts for 1.4% of psoriasis cases in children. Follicular psoriasis is an underdiagnosed variant of psoriasis, with only about 15 cases reported till date, characterized by scaly follicular papules on the trunk and extremities. Although two thirds of these reported occurred in adults, cases have been described in children under the age of 10 years. Follicular lesions may present without psoriasis vulgaris elsewhere. We report here a 13-year-old boy who presented with severe erythrodermic psoriasis that started as dark, rough, horny, discrete, follicular papules over knees and elbows, associated with nail and joint involvement. Such a presentation of follicular psoriasis causing erythroderma is uncommonly seen in children and has not yet been reported in literature.

**Key words:** Child, erythroderma, follicular psoriasis

**INTRODUCTION**

Erythroderma is a well-recognized entity in the adult age group, but there are few studies on erythroderma in the pediatric age group. It is an uncommon, yet striking entity in children with an incidence of 0.11%.\(^1,2\) Psoriasis affects 0.71% of the population under 18\(^3,4\) and psoriatic erythroderma accounts for 1.4% of psoriasis among children and adolescents.\(^5,6\) As in adults, the cause of erythroderma in children is difficult to establish and diagnosis is delayed due to poor specificity of clinical and histological features. Trauma, infections, and drugs as well as environmental, psychological, and metabolic factors can trigger psoriasis and its erythrodermic form. The generalized manifestations of the disease are erythema, desquamation, edema, and systemic compromise (fever, dehydration, malaise, malnutrition).

Erythroderma may arise from any type of psoriasis in children. Follicular psoriasis, which is characterized by scaly, hyperkeratotic, follicular papules on the trunk, and extremities, is a common but neglected entity in the dermatological literature. Major dermatology reference textbooks do not highlight this subtype of psoriasis, and there is paucity of reports on the subject. Erythroderma with severe joint and nail involvement caused by follicular psoriasis has not been reported so far, making our case the first of its type in the literature.

**CASE REPORT**

A 13-year-old boy presented with scaling and erythema of skin since six months and difficulty in closing the eyes completely since four months. His skin lesions started as dark, rough, horny papules over the knees and elbows, which became erythematous and scaly after a few months and gradually spread to involve the whole body. Small areas of skin (spared of erythema and scaling) with these horny papules were still visible over the shoulders and flanks at the time of admission [Figure 1]. The face showed tightening of skin, bilateral ectropion of lower eyelids, furrowing of skin of the nasolabial area, and fissuring at the angle of the mouth [Figure 2]. Scalp was covered with thick scales. Palmoplantar hyperkeratosis was present and associated with thick, lusterless nails with subungual hyperkeratosis, and longitudinal ridging [Figure 3].

The joints of both the knees were widened with bilateral genu valgum [Figure 4]. The range of movement was normal, but they had recently become painful. Radiographic findings suggested
changes similar to rickets. Family history was negative and there was no history of trauma, drugs, infections or any other triggers for his condition.

Based on the above findings and after careful exclusion of other causes of erythroderma in children, a clinical diagnosis of erythroderma due to follicular psoriasis was made. This was confirmed by histopathology [Figure 5] which showed parakeratosis, hypogranulosis, elongated rete ridges with corresponding dermal papillary hyperplasia, suprapapillary thinning of epidermis, and neutrophilic infiltrate in the dermis. The follicles also showed plugging and ostial parakeratosis.

The patient was managed conservatively using emollients and a well-controlled fluid and food intake. Methotrexate was started in the dose of 7.5 mg/week after ensuring that the routine investigations were normal. A single injection of vitamin D (6 lakhs IU) was given for the joint deformities and braces were advised for the same. The erythroderma showed significant improvement in 3 weeks and the follicular lesions resolved completely by 8 weeks.

**DISCUSSION**

Severe erythrodermic psoriasis with joint and nail involvement is uncommon in children and that associated with follicular psoriasis has never been reported till date.

Follicular psoriasis in itself is an under-diagnosed entity. The
exact incidence is unknown, as we found only three reports mentioning a total of 15 cases in the literature. It affects both the sexes and although two thirds of these occurred in adults, cases have been described in children under the age of 10 years. Lesions follow a chronic course ranging from 6 months to 23 months. Two clinical subtypes have been described. The adult form is more common in females, presenting with discrete hyperkeratotic papules usually involving the thighs. The rarer childhood form presents either as grouped, asymmetrical, horny, follicular lesions affecting the trunk, axillae, and bony prominences or as a wide-spread eruption resembling pityriasis rubra pilaris, except that the latter has typical islands of spared skin associated with an orange-red erythema and palmoplantar keratoderma. There is a pre-disposition among dark-skinned patients and in those with pre-existing plaque type psoriasis, especially of the scalp, though follicular lesions may present without psoriasis vulgaris elsewhere (as occurred in our patient). When encountering follicular type lesions an index of suspicion and a careful general skin examination is required to exclude lichen planopilaris. Lichen spinulosus has grouped, minute, flesh-colored papules, which can be easily distinguished. Other differential diagnoses are follicular eczema and folliculitis.

Histological features vary with the duration of the lesion. Established lesions show follicular plugging, dilation of the infundibulum and marked ostial parakeratosis with a neutrophilic infiltrate and loss of the granular layer (which is not seen in pityriasis rubra pilaris).

Erythroderma arising from any type of psoriasis in children is a life-threatening condition. Careful monitoring of the patient and correction of the hematologic, biochemical, and metabolic imbalance improves the final outcome in these patients. However, diagnosing its underlying cause may require histopathological confirmation, as in our case, which brought to light the surprising diagnosis of follicular psoriasis. We hope to highlight the fact that this type of psoriasis may be more common in clinical practice than is thought to be and should also be considered as a possible diagnosis when erythroderma is preceded or accompanied by follicular papules.

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