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Case Report

Successful treatment of epidermolysis bullosa pruriginosa with cyclosporine

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Abstract Epidermolysis bullosa (EB) pruriginosa is an infrequent variant of dystrophic epidermolysis bullosa (DEB) which presents clinically with severe itching leading to formation of thickened, eczematous nodules and plaques. Diagnosing the condition is extremely challenging due to variation in ages of patients at presentation, rarely seen undamaged blisters, unequivocal histopathology and similarity to other dermatological disorders. In this report, we describe a case of 23 years old male who presented with blistering and pruritus with no family history of the disease. He had taken multiple medications without much relief so we gave him Cyclosporine which proved to be effective in relieving his symptoms and blistering.

Key words

_____.

Introduction

Epidermolysis bullosa (EB) is one of blistering diseases presenting with fragile skin and trauma-induced blistering.[1] This is caused by hereditary abnormalities in the proteins that join the dermis and epidermis together.[2] EB is divided into three types depending on the underlying location of blister: if it is intra-epidermal, it's called EB simplex, blister within lamina lucida is junctional EB and dystrophic EB's blister is located below lamina densa.[3] An aberrant COL7A1 gene gives rise to dystrophic EB due to abnormal collagen VII. Type VII collagen is an important constituent of anchoring fibrils in sublamina densa.[4] There have been very few case reports of EB pruriginosa till date.[2]

The cause of intense pruritus in EB pruriginosa is not completely understood, though raised IgE levels might be an important explanation.[5] EB pruriginosa presents with severe itching leading to formation of thickened, eczematous nodules and plaques soon after birth,[5] or more frequently after a few decades of life as seen in the proband.[6] Cutaneous lesions are either preceded by or coincide with severe itching. The sites of predilection are forearms and shins, however, other parts of limbs and trunk may be involved. Usually, there is facial and flexural sparing.[4] Infrequently seen bullae, scars, hypertrophic and eczematous purplish plaques and milia are other clinical manifestations of the disease, along with nail dystrophy. Therefore, the disease closely mimics eczema, lichen planus and autoimmune blistering disorders and pose diagnostic difficulty.[7]

Histopathological findings of cutaneous lesions include hyperkeratosis, acanthosis, subepidermal bulla, fibrosis, vascular proliferation and a lymphocytic infiltrate. Electron microscopic findings indicate reduced number and altered structure of anchoring fibrils in sublamina densa.[7]

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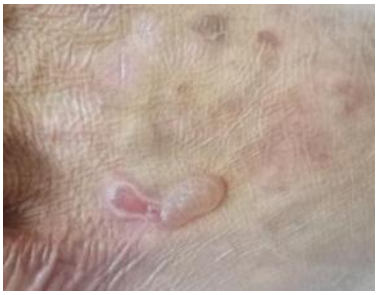
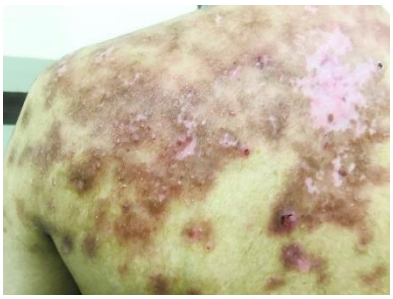


Figure 1



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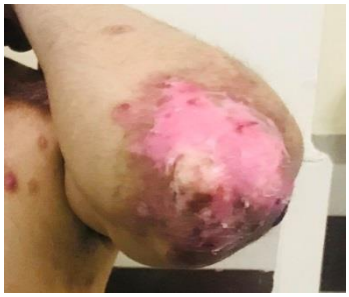

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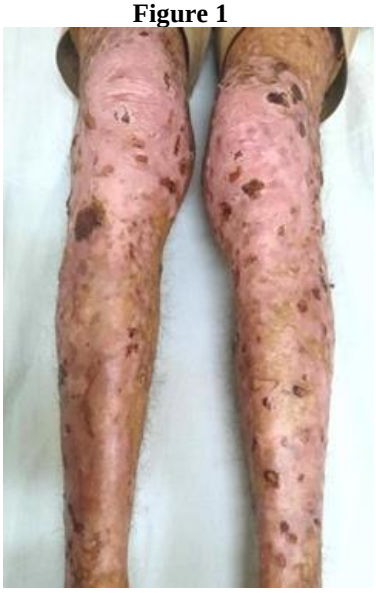

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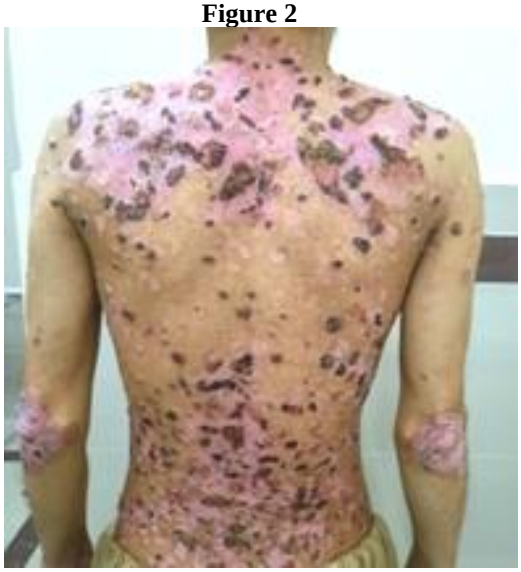

Figure 5

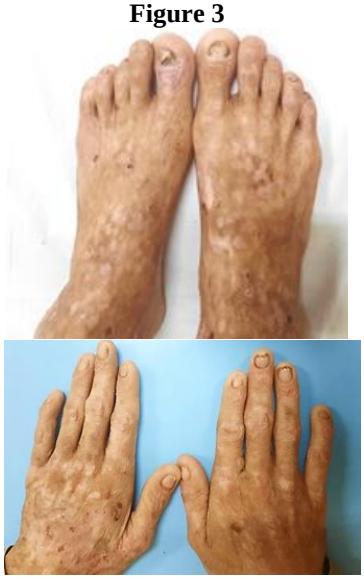

Figure 6,7

Management options and their response is varied for EB pruriginosa. Particularly, itching is quite resistant. The mainstay of therapy remains easing of pruritus with topical steroids and antihistamines. Previously used treatments include local and systemic steroids, oral retinoids, phototherapy, topical tacrolimus, systemic cyclosporine, dapsone, thalidomide and cryotherapy.[6] We prescribed oral cyclosporine, oral antihistamines and topical steroids to our patient to which he responded. Itching was relieved and frequency of new lesions was markedly reduced.

Case report

A 23 years old male presented with intense itching followed by blister formation for last 3 years, starting from axilla and progressively involving the whole body. Itching was continuous throughout the day and night and led to blister formation at the site of scratching. Blisters were tense **(Figure 1)**, didn't rupture on their own and contained serous fluid. After rupture, the crusted erosions gradually healed with scarring and milia formation **(Figure 2)**.

There was predominant involvement of elbows, knees, shins and trunk **(Figure 3-5)**. There was history of shedding of all twenty nails and recurrent painful oral ulcers. There was no associated aggravating or relieving factors. No history of itching in contacts or atopy. No family history of any skin disease. His parents were cousins.

All twenty nails were dystrophic **(Figure 6,7)**. He had ulcers involving buccal mucosa along

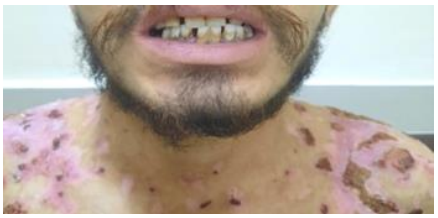

Figure 8

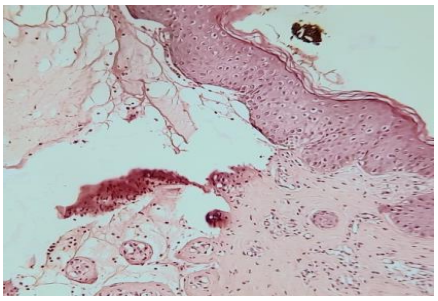

Figure 9

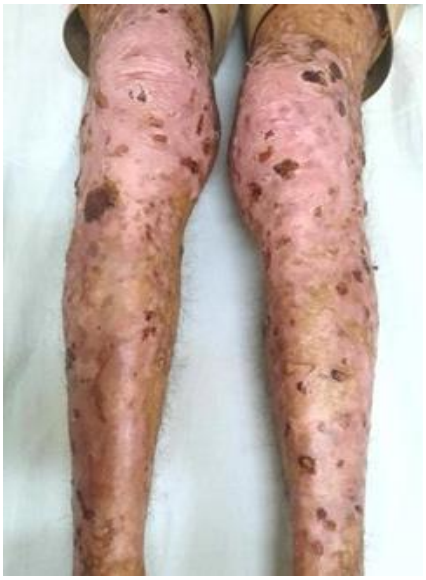

Figure 10 Before

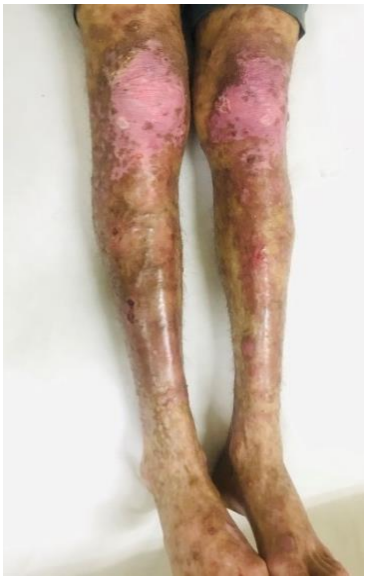

Figure 11 After

with gingival hyperpigmentation and teeth discoloration **(Figure 8)**. Palms and soles had keratoderma. Head and neck and all major flexures were spared.

On investigations, he had microcytic hypochromic anemia; low serum albumin and raised IgE level. Histopathology of skin revealed a subepidermal hemorrhagic blister **(Figure 9)**. The underlying dermis showed moderate chronic inflammatory infiltrate especially around the blood vessels, suggestive of EB pruriginosa.

The patient's symptoms didn't improve with oral steroids and phototherapy. However, his symptoms markedly improved with Cyclosporine 100mg twice a day and he stopped developing new blisters. Unfortunately, due to the cost of the drug, he couldn't continue it for long and repeatedly presented with relapses.

Diagnosis of EB pruriginosa relies on typical history and clinical features of mechanobullous disease with or without family history, supported by dermatopathological and electron microscopic features.[6] Confirmation of underlying mutation may be done by genetic analysis.[8]

Oral Cyclosporine has been used in some cases[9] of EB pruriginosa, so we wanted to see its effect in our patient since he was not responding to oral steroids. Fortunately in two weeks almost 80% of his lesions healed and no new blisters appeared **(Figure 10,11)**. There was marked reduction in pruritus as well. Therefore, we conclude that oral cyclosporine can be a good choice in treating resistant pruritus and blistering in EB pruriginosa.

References

1. Rivitti-Machado M, C, Toma J, T, Pompeu V, M, A, Valente N, Y, S, Doche I: Epidermolysis Bullosa Pruriginosa Associated with Folliculitis Decalvans: Case Report and Review of the Literature. Skin Appendage Disord 2018;4:339-41. doi: 10.1159/000485521
2. Vivehanantha S, Carr RA, McGrath JA, Taibjee SM, Madhogaria S, Ilchyshyn A. Epidermolysis bullosa pruriginosa: a case with prominent histopathologic inflammation. Jama Dermatology. 2013 Jun 1;149(6):727-31.

3. Fine JD, Eady RA, Bauer EA, et al. The classification of inherited epidermolysis bullosa (EB): report of the Third International Consensus Meeting on Diagnosis and Classification of EB. J Am Acad Dermatol. 2008;58(6):931-50.

4. Das JK, Sengupta S, Gangopadhyay AK. Epidermolysis bullosa pruriginosa-Report of three cases. Indian Journal of Dermatology, Venereology, and Leprology. 2005 Mar 1;71(2):109.
5. Ozanic Bulic S, Fassihi H, Mellerio JE, McGrath JA, Atherton DJ. Thalidomide in the management of epidermolysis bullosa pruriginosa. British Journal of Dermatology. 2005 Jun;152(6):1332-4.
6. Kim WB, Alavi A, Pope E, Walsh S. Epidermolysis bullosa pruriginosa: case series and review of the literature. The international journal of lower extremity wounds. 2015 Jun;14(2):196-9.
7. Banky JP, Sheridan AT, Storer EL, Marshman G. Successful treatment of epidermolysis bullosa pruriginosa with topical tacrolimus. Archives of dermatology. 2004 Jul 1;140(7):794-6.
8. Grunwald MH, Amichai B, Avinoach I, Kedar T, Bergman R. Dystrophic epidermolysis bullosa associated with eosinophilic infiltrate and elevated serum IgE. Pediatric dermatology. 1999 Jan;16(1):16-8.
9. Cambiaghi S, Brusasco A, Restano L, Cavalli R, Tadini G. Epidermolysis bullosa pruriginosa. Dermatology. 1997;195(1):65-8.