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Spectacular efficacy of isotretinoin in pustular psoriasis in a child

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Abstract

Generalized pustular psoriasis (GPP) occurs rarely in children, it is a chronic inflammatory disorder characterized by the presence of aseptic pustules overlying on erythematous plaques with systemic symptoms such as fever and fatigue. We report the case of a GPP treated with isotretinoin with success. Our case emphasizes that isotretinoin can be considered as a good option in the treatment of pediatric psoriasis because of its short half-life but its effectiveness has not been yet established.

Keywords: Pustular psoriasis, isotretinoin, child

Introduction

Generalized pustular psoriasis (GPP) occurs rarely in children, it is characterized by the presence of painful erythematous lesions associated with aseptic pustules. We report the case of a GPP treated with isotretinoin with success and we suggest this treatment as a good alternative in treating adolescent patients with GPP.

Case report

A 16 year-old male patient with no relevant medical history presented in our department with widespread pustules and erythema on back and trunk of 1 month duration. No drugs were taken prior to the eruption. He had also fever (39°) but no other systemic abnormalities were detected. Total blood count and inflammatory evaluation tests reveal hyperleukocytosis (19 000/mm²) and CRP rate up to 150 nm. Serum calcium level was normal. A biopsy revealed psoriasiform changes and subcorneal pustules favoring the diagnosis of generalized pustular psoriasis. Methotrexate was suggested for the treatment but the parents refused any immunosuppressive treatment due to the COVID-19 pandemic. As oral acitretin wasn't available in our country, the patient received isotretinoin with a dosage of 0, 6 mg/kg per day (35 mg per day) during 6 months with good results within 1 month.

Discussion

GPP is a chronic inflammatory disorder characterized by the presence of primary sterile pustule overlying on erythematous plaques with systemic symptoms such as fever and fatigue. The etiology of GPP is partially understood. It is mostly caused by recessive mutations in IL36RN. CARD14 mutation is also considered as a predisposing factor for GPP with psoriasis vulgaris ^[1, 2]. In Histopathology, spongiform pustules of Kofoji, parakeratosis and psoriasiform hyperplasia are mainly observed. The above clinical and histological features reccur repeatedly. Other pustular dermatoses should be considered in the differential diagnosis of GPP: acute generalized exanthematous pustulosis, subcorneal pustulosis and IgA pemphigus ^[3]. In our case, histology examination confirmed the diagnosis. The treatment of choice in GPP is acitretin. However, teratogenicity of oral acitretin is a concern for adolescents and teenage parents; it required an effective contraception during the treatment and 3 years after discontinuation. On the other hand, isotretinoin has also been reported in the treatment of pediatric psoriasis but there is limited data on using isotretinoin in GPP in the literature. Isotretinoin is comparable to etretinate in its effectiveness and it requires contraception during the treatment and 4 weeks following discontinuation ^[6], making it a reasonable choice in pediatric population. As assecon line therapy, good results have been reported with methotrexate, cyclosporine.

Adalimumab, etanercept, PUVA phototherapy for recalcitrant disease. Most recently, new biologic therapies

targeting IL-1, IL-12/23, IL-17A and IL 36 have been used with good results ^[4,5].

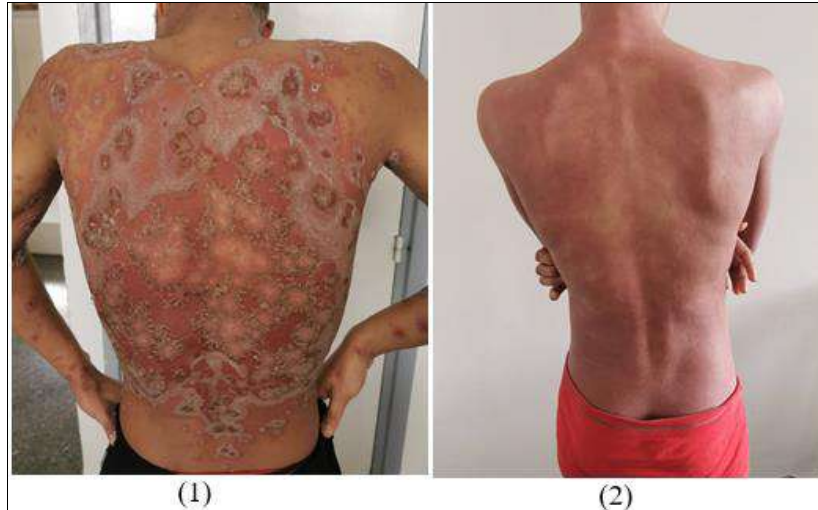


Fig 1: Generalized pustular psoriasis: erythematous lesions covered by asptic pustules (1); clinical improvement within 1 month after the use of isotretinoin (2)

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