Journal of the Turkish Academy of Dermatology
eISSN 1307-394X

Case Report DOI: 10.6003/jtad.19131c1

Palmoplantar Pustular Psoriasis Induced by Infliximab ın A Patient With Crohn's Disease

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Published:
J Turk Acad Dermatol 2019; **13 (1)**: 19131c1
This article is available from: http://www.jtad.org/2019/1/jtad19131c1.pdf
Key Words: nti-TNF-Alpha Agents, Infliximab, Palmoplantar Pustular Psoriasis

Abstract

Observation: We report the case of a 22-year-old male with a diagnosis of Crohn's disease who developped palmoplantar pustular psoriasis under 15th month of infliximab treatment. While antitumour necrosis factor (anti-TNF)-alpha therapy is an effective treatment option for psoriasis, there are reports of occurrence or aggravation of psoratic eruptions with these agents. De novo skin lesions in our patient without a personal or family history of psoriasis was diagnosed as paradoxical palmoplantar pustular psoriasis.

Introduction

Palmoplantar pustular psoriasis (PPP) is a chronic, relapsing skin disease characterized by sterile pustules involving palms and soles. Antitumour necrosis factor (anti-TNF)-alpha therapy is widely used for the treatment of many inflammatory conditions such as rheumatoid arthritis, ankylosing spondylitis, psoriasis, psoriatic arthritis, Crohn's disease etc. Despite being an effective treatment option for psoriasis, there are reports of occurrence or aggravation of PPP with anti-TNF agents [**1**].

Case Report

22-year-old man presented to our clinic with the complaint of painful lesions on both hands and feet. He reported that the lesions appeared suddenly two weeks before. He had been diagnosed with Crohn's disease 6 years ago due to recurrent bouts of diarrhea and constipation that also led to colonoscopic findings. He also had been suffering from erythematous nodules on both legs which were consistent with erythema nodosum clinically and histologically. His past medical history was otherwise insignificant, including history of psoriasis. Due to his Crohn's disease and associated panniculitides the patient was prescribed infliximab (500mg every 6 weeks) since 15 months, methotrexate (12,5mg/day), prednisolone (25mg/day) and meselazine (3g/day). At presentation, dermatologic examination showed symmetrically distributed pustules and brown macules involving both palms and soles (**Figure 1, Figure 2a and b**). Nail examination was normal. Complete blood count and routine biochemistry was unremarkable for infections. Punch biopsy was performed and histopathologic examination was compatible with pustular psoriasis. On clinical grounds, the patient was diagnosed with paradoxical palmoplantar

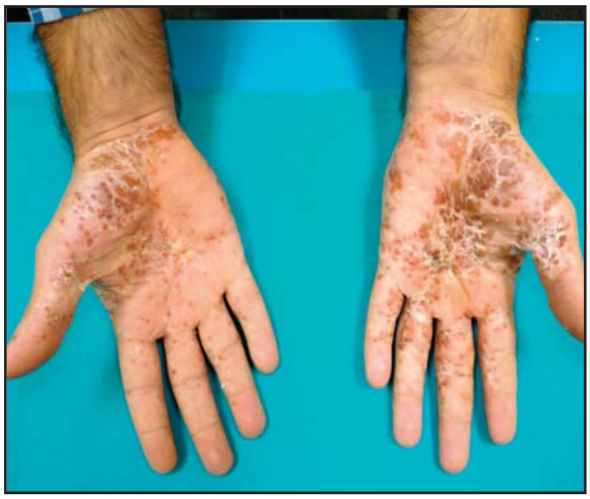

Figure 1. Thenar eminences and central palms of both hand are studded with pustules and brown macules

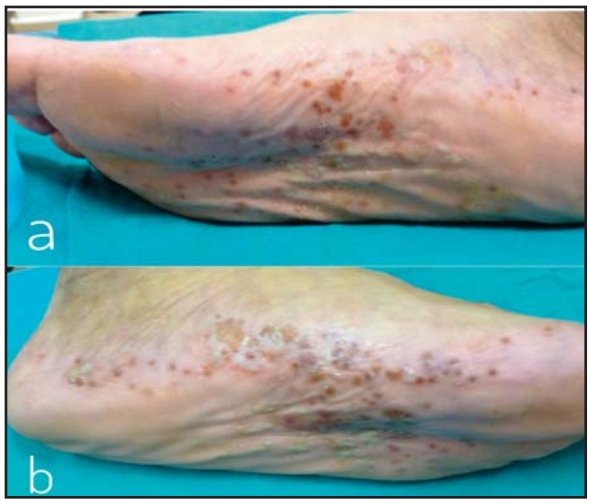

Figure 2 a and b. The instep and medial borders of both feet are involved symmetrically

pustular psoriasis due to infliximab. We advised the patient to discontinue infliximab. However, the patient did not consent, as he was asymptomatic under infliximab therapy. He was started on potassium permanganate wet dressing and 0.05% clobetasol propionate cream under occlusion. Despite temporary improvement with topical treatment, after the following infliximab infusion the patient presented with aggravated symptoms. The erythema, edema and pain was significantly increased which supported the diagnosis of paradoxical palmoplantar pustular psoriasis **(Figure 3**)

Discussion

Palmoplantar pustular psoriasis is mostly considered as a localized form of psoriasis. The condition presents with both fresh yellow pustules and eroded lesions and brown macules in middle-aged adults. Etiology is still unclear. It affects smokers and diabetics more frequently [**2,3**]. Potent or very potent topical corticosteroids are first-line treatment options in PPPP. Conventional systemic agents such as acitretin, methotrexate, ciclosporine can be used in refractory cases [**4**].

Antitumour necrosis factor (anti-TNF)-alpha therapy can result in paradoxical psoriasiform lesions, mostly in the form of palmoplantar pustular psoriasis. Pathogenesis is thought to involve an anti-TNF induced increased expression of type I interferons [**5**]. A literature se-

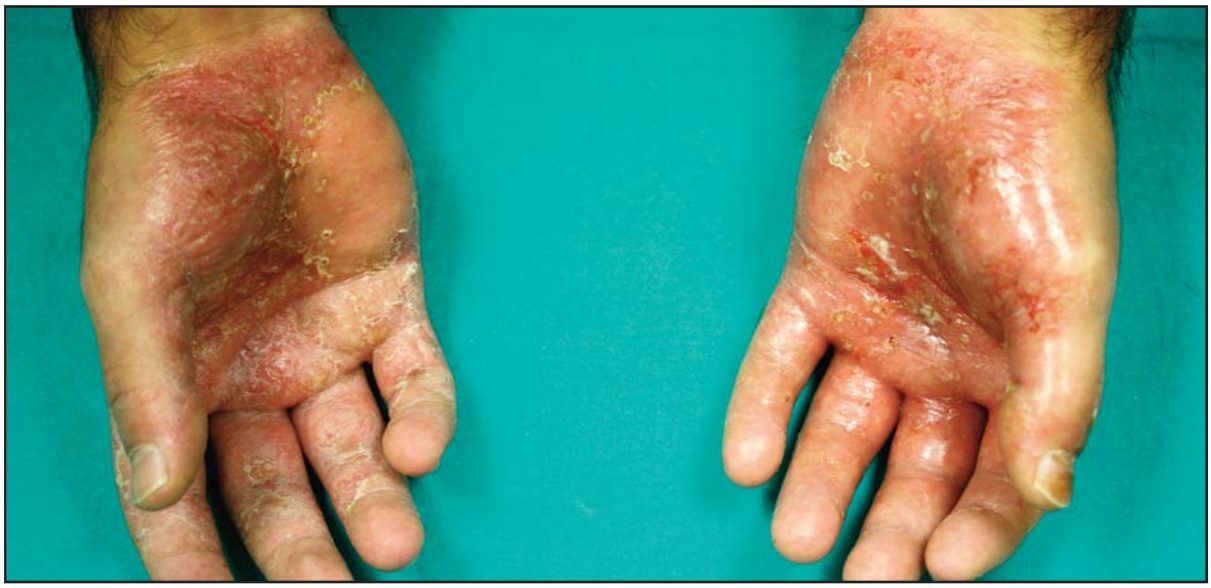

Figure 3. Exacerbation of the condition after infliximab infusion with pronounced eryhthema and edema. Nail discoloration is noted on the left thumb due to application of potassium permanganate wet dressing

arch of the articles published between January 1990 and September 2007 revealed 127 anti-TNF induced psoriasis cases. Most of the patients were diagnosed with rheumatoid arthritis, ankylosing spondylitis, and Crohn's disease and were found to be under treatment with infliximab (55.1%), etanercept (27.6%) and adalimumab (17.3%). Palmoplantar pustular psoriasis was detected in nearly half of the cases. The average duration of anti-TNF therapy until appearance of lesions was reported to be 10.5 months. Discontination of anti-TNF agent along with initiation of a systemic therapy was observed to be the best treatment modality. Topical steroids or switching to another anti-TNF agent were less successful treatment modalities [**6**]. Incidence of psoriasis was investigated in patients with severe rheumatoid arthritis (RA). While there were no cases of psoriasis in 2880 RA patients treated with disease-modifying antirheumatic drugs, incidence rate of psoriasis was 1.04 per 1000 person years in 9826 patients treated with anti-TNF agents. In this study, adalimumab was found to be the most common culprit for anti-TNF induced psoriasis followed by etanercept and infliximab [**7**].

In conclusion, palmoplantar pustular psoriasis is a rare cutaneous side-effect of anti-TNF alpha therapy. However underlying etiopathogenetic mechanisms of this paradoxical reaction needs to be further investigated.

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