



Psoriasis exacerbation following intravesical BCG immunotherapy for bladder carcinoma: A case report

Mesane kanseri tedavisinde intravezikal BCG immünoterapisi kullanımı sonrası psöriazis alevlenmesi: bir olgu sunumu

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To Editor,

Psoriasis is a chronic, immune-mediated inflammatory disease with a broad spectrum of clinical manifestations that can be out or exacerbated by genetic and environmental factors¹. Exacerbations of psoriasis have been observed after administering influenza, tetanus-diphtheria, and Bacillus Calmette-Guérin (BCG) vaccines^{2,4}. Additionally, BCG immunotherapy, used to treat bladder cancer, may be one of the causes of psoriasis flare-ups⁵. Here, we present a male patient with psoriasis vulgaris who had psoriasis exacerbation following intravesical BCG immunotherapy for bladder carcinoma treatment.

A 58-year-old male with a history of psoriasis vulgaris applied to our dermatology outpatient clinic due to a flare-up of his lesions. He was diagnosed with psoriasis 23 years ago and used topical treatments, methotrexate, cyclosporine, infliximab, and adalimumab for the disease in the past. Over the past two years, his psoriasis had been completely clear under ustekinumab. After he was diagnosed with invasive urothelial carcinoma, ustekinumab was stopped. Three months after taking intravesical BCG immunotherapy, one week after the third dose, pruritic lesions occurred on his body. He had no recent history of infection or allergy. Dermatologic

examination revealed widespread, pruritic erythematous plaques on the trunk and extremities, and pitting on the nails. (Figure 1) Histopathological analysis of a punch biopsy from the plaque on the trunk was compatible with psoriasis. Based on clinical examination and histopathological analysis, the patient was accepted as psoriasis flare-up. When the patient's complaints appeared one week after the third BCG immunotherapy, and the Naranjo Adverse Reaction score calculated was 5 (5-8: possible), psoriasis exacerbation was considered secondary to intravesical BCG immunotherapy. The Psoriasis Area and Severity Index score was 25. Complete blood count, liver/kidney function tests, and lipid profile were within normal ranges. Acitretin (25 mg/day) and topical calcipotriol-betamethasone ointment were prescribed.

The etiological relationship between psoriasis and vaccines is still uncertain. Immune dysregulation secondary to viral components and adjuvants of vaccines can cause the induction and exacerbation of psoriasis². BCG has been used as a local immunotherapy for bladder cancer and can show its antitumor effects by starting an inflammation cascade resulting in the death of tumor cells. The side effects of BCG immunotherapy range from urinary tract symptoms to sepsis. Additionally, cutaneous findings following BCG immunotherapy, such as granulomatous skin lesions,

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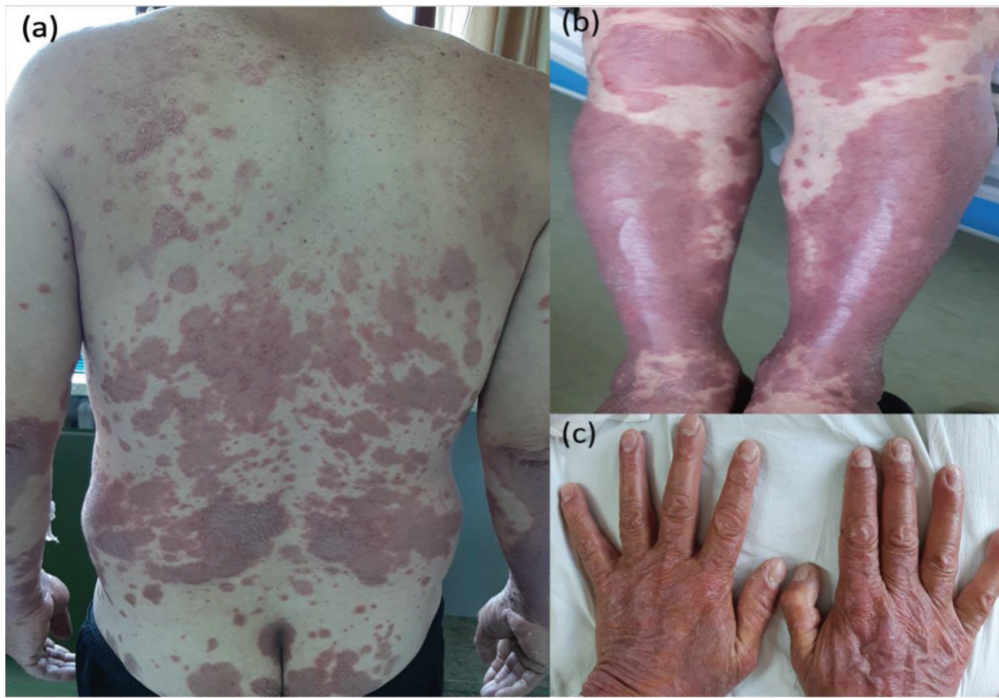


Figure 1. Widespread erythematous papules, plaques on the trunk (a), extremities (b), and pitting on the nails (c) one week after the third BCG immunotherapy

ulcers, and lymphadenopathy, have been reported⁶. BCG vaccine-induced psoriasis has been reported in a child⁴. Also, new-onset and flare-up of psoriasis-psoriatic arthritis cases following intravesical BCG immunotherapy were described in the literature^{5,8}. Wee et al.⁷ described a bladder carcinoma patient without psoriasis history under BCG immunotherapy who suffered erythrodermic pustular psoriasis. Queiro et al.⁸ published a case that developed psoriatic arthritis following intravesical BCG application. BCG immunotherapy can induce Th1 and Th17-predominant immunologic response. Th1 and Th17 cells produce cytokines such as TNF- α , IL-12, IL-17, IL-23, and IL-22 that have an important role in the psoriasis pathogenesis^{2,9}.

It is essential to remember that BCG immunotherapy can be a triggering factor for the exacerbation of psoriasis. With this case report, we would like to point out that the role of vaccines and immunotherapy in psoriasis pathogenesis should be taken into consideration and questioned. We think new case reports and studies will help us detect the relationship between psoriasis and BCG immunotherapy.

Ethics

Informed Consent: The patient in this manuscript has given written informed consent to the publication of his case details.

Footnotes

Authorship Contributions

Concept: Y.C.E., A.S., E.A., Design: Y.C.E., A.S., E.A., Data Collection or Processing: Y.C.E., A.S., E.A., Analysis or Interpretation: Y.C.E., A.S., E.A., Writing: Y.C.E., A.S., E.A.

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