Morbilliform eruption in a patient receiving intravesical Bacilli Calmette-Guérin

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Keywords: BCG immunotherapy; BCG-osis; BCG vaccine; drug eruption; morbilliform drug eruption.

INTRODUCTION

Widely known as a vaccine against tuberculosis, Bacilli Calmette-Guérin (BCG) is also known to have antimalignant properties. Intravesical BCG immunotherapy is used in the treatment of superficial bladder cancer. It is postulated that the BCG bacilli trigger a cascade that leads to increased levels of interleukin-12 and interferon gamma production, which mediate tumor destruction.[1] Major side effects occur in less than 5% of those treated and are secondary to dissemination of the bacilli through vesicoureteral reflux or hematogenous spread.[2]

CASE REPORT

A 63-year-old white man with urothelial carcinoma of the bladder undergoing intravesical Tice BCG treatments had a pruritic cutaneous eruption on his right arm and a subjective fever 1 day after his third instillation of intravesical BCG. Two days later, parotid gland enlargement developed, and the patient was given ampicillin by his primary care physician for possible parotitis. After 1 dose of ampicillin, the eruption spread to his trunk and face. The physician administered a steroid injection and switched the medication to ciprofloxacin, which resulted in temporary improvement of symptoms.

Four days later, when the patient presented to the urology clinic for his fourth instillation of intravesical BCG, he was febrile, so the treatment was withheld. Several hours later he had chills, myalgias, and recurrence of his skin eruption.

On physical examination, he was noted to have multiple pink macules coalescing into patches involving approximately 30% of the back and 20% of the anterior trunk and multiple 2- to 6-cm macules and papules on the bilateral upper and lower extremities (Fig 1). A punch biopsy found sparse superficial perivascular dermatitis with focal minimal spongiosis, consistent with a dermal hypersensitivity reaction.

Abbreviation used:

BCG: Bacilli Calmette-Guérin

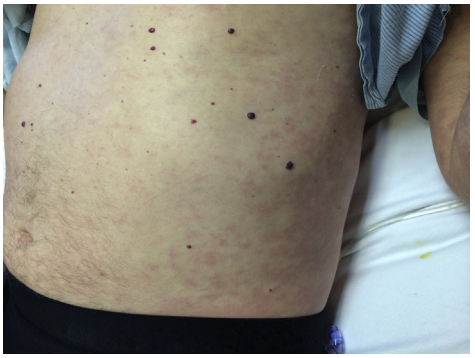

Fig 1. BCG-osis. Widespread light pink macules and papules on the anterior trunk.

Increasing clinical suspicion of systemic hypersensitivity reaction to BCG dissemination prompted the initiation of antituberculous therapy with isoniazid, rifampin, and levofloxacin. After 1 week of therapy, the patient experienced symptomatic improvement, so this regimen was continued for 3 months, and he had complete resolution. Further

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Funding sources: None.

Conflicts of interest: None declared.

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JAAD Case Reports 2015;1:30-1.
2352-5126

http://dx.doi.org/10.1016/j.jdcr.2014.10.004

treatment with intravesical BCG was contraindicated in this patient because of this reaction.

DISCUSSION

Systemic absorption of BCG into the bloodstream and reactivation of the attenuated bacilli is known as BCG-osis.[3] Early BCG-osis presents with fever and other nonspecific constitutional symptoms. Systemic sequela can include abnormal hematologic and liver function tests, respiratory comprise, and multiorgan failure. Very few reports specify cutaneous manifestations; skin findings can take the form of purpuric patches, pityriasis rosealike eruption, or a morbilliform eruption, as in our patient.[4,5] Clinical recognition of BCG infection is challenging, but this entity should be considered in the differential diagnosis of patients with a recent exposure to BCG and an unexplained, rapid-onset, widespread skin eruption. Because BCG reactivation can be fatal, providers must have a low threshold to begin antituberculous therapy.

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