

Testosterone Pellet–Induced Generalized Drug Eruption

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PRACTICE POINTS

- Dermatologists should be aware that testosterone pellet implantation can cause dermatitis overlying the implantation site, which can generalize and differ in morphologic presentation.
- For patients presenting with a suspected case of testosterone pellet–induced dermatitis, a high-dose oral corticosteroid can be deployed as an effective therapy.

To the Editor:

Testosterone-replacement therapy (TRT) is indicated for hypogonadism. The benefits of TRT are well documented, with multiple options available for delivery. Testosterone pellet implantation (TPI) is an effective treatment option for hypogonadism with minimal adverse reactions. Availability of TRT is increasing, as facilities are offering off-label applications. Although TPI generally is well tolerated, cutaneous reactions have been documented. We present a patient with drug-induced dermatitis following TPI.

A 51-year-old man with hypogonadism presented with an extremely pruritic rash that began on the left buttock 3 days after receiving his fourth TPI. The patient had received subcutaneous insertions of 8 testosterone pellets (75 mg per pellet every 6 months) to the left buttock. He denied any history of a similar rash. His medical history was remarkable for hyperlipidemia, which was controlled with niacin and omega-3 fatty acids (fish oil). Other medications included glucosamine. Before presenting to our clinic, he was given a 40-mg intramuscular injection of triamcinolone acetonide and trimethoprim-sulfamethoxazole twice daily for

7 days, a methylprednisolone dose pack, and triamcinolone ointment 0.1% twice daily by his primary care physician, all without improvement of the rash.

Physical examination revealed multiple well-circumscribed, coalescing clusters of darkly erythematous papules and dermal plaques of varying size on the buttocks with extension to the lower back, abdomen, and thighs (Figure 1). The differential diagnosis included lichenoid eruption, pseudolymphoma, sarcoidosis, and granuloma annulare.

Histologic examination of a punch biopsy revealed an epidermis with a normal stratum corneum and subtle cell-poor vacuolar interface dermatitis with rare necrotic keratinocytes. There was a mild perivascular lymphocytic infiltrate with slight edema within the dermis without notable eosinophils or findings indicative of a vasculitic process (Figure 2).



FIGURE 1. Testosterone pellet–induced dermatitis before treatment.

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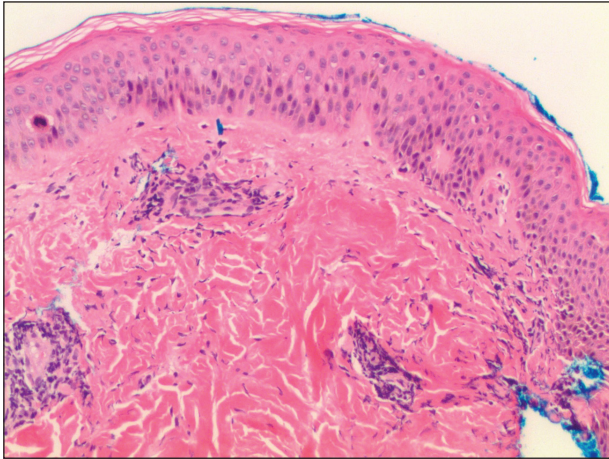


FIGURE 2. Histologic findings from a punch biopsy demonstrated an epidermis with a normal stratum corneum and subtle cell-poor vacuolar interface dermatitis with rare necrotic keratinocytes. There was a mild perivascular lymphocytic infiltrate with slight edema and without notable eosinophils or findings indicative of a vasculitic process within the dermis (H&E, original magnification $\times 10$).

Oral prednisone 60 mg daily and betamethasone ointment 0.05% applied twice daily were started, with notable improvement of the rash in 1 week (Figure 3). Given the temporal relationship of the TPI, histologic findings suggestive of drug eruption, and resolution of symptoms shortly after treatment, a diagnosis of testosterone pellet-induced generalized dermatitis was established.

Testosterone-replacement therapy is the principal treatment of male pathologic hypoandrogenism, but off-label prescription frequently occurs for age-related hypogonadism and hypoactive sexual desire disorder.¹ Testosterone-replacement therapy also can enhance sexual desire and function and improve mood in premenopausal and postmenopausal women with testosterone deficiency.² Delivery options include topicals, intramuscular injections, oral formulations, transdermal patches and gels, and subcutaneous placement of testosterone pellets (TPI).

Cutaneous reactions to TPI are rare. Hirsutism, male-pattern hair loss, and acne are possible cutaneous adverse reactions.³ In addition, a localized erythematous pruritic eruption at the implantation site and an immunologic foreign-body reaction to testosterone pellets have been reported.⁴

In one case report, a man developed recurrent ill-defined, erythematous, scaly plaques and patches over the buttocks and thighs, consistent with testosterone-induced eczematous dermatitis, subsequent to his second TPI. The patient presented with the eruption within 4 weeks after the most recent implantation, similar to our case, but differed temporally in initial presentation, presenting after the second implantation.⁵ Our case differed



FIGURE 3. Testosterone pellet-induced dermatitis after treatment with oral prednisone and betamethasone ointment.

in morphologic presentation (dermal plaques as opposed to eczematous change) and refractoriness to triamcinolone injection.

Testosterone-replacement therapy is becoming more widely available. Lack of regulation of proper marketing by such facilities as medical spas that offer TPI for off-label applications has led to a rampant increase in TRT prescribing, possibly foreshadowing an increase in adverse cutaneous reactions to TRT.⁶

Our case of histologically consistent testosterone pellet-induced dermatitis highlights a rare cutaneous adverse reaction that can occur subsequent to TPI and illustrates the efficacy of high-dose oral steroids as a treatment option. With increased use of TRT, physicians should be cognizant of the potential adverse cutaneous effects related to this treatment and counsel patients appropriately prior to initiating treatment.

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