

# Tacrolimus Ointment 0.1% for the Treatment of Peristomal Skin Disease: 3 Case Reports

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*Patients with stomas face a variety of problems, such as skin breakdown or ulceration at the peristomal site, that can complicate care. Topical steroids are frequently used to treat various inflammatory conditions that affect peristomal skin with good results, but chronic use can lead to undesirable side effects. Tacrolimus ointment 0.1%, a nonsteroidal immunosuppressant, could offer a more favorable alternative to topical steroids. We present 3 cases of peristomal skin disease that were successfully treated with tacrolimus ointment 0.1%.*

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Peristomal skin disease is difficult to treat and is becoming more common as ostomies increase. Various inflammatory and infectious conditions occurring at stomal sites can be difficult for nondermatologists and well-trained dermatologists alike to diagnose and manage.<sup>1-3</sup> Topical steroids are effective for many inflammatory conditions affecting peristomal sites, but chronic use can lead to striae, atrophy, and ulceration.<sup>4</sup> Many times, the problem occurs under the stoma wafer, resulting in

steroid occlusion. To avoid these complications, we used tacrolimus ointment 0.1%, a nonsteroidal immunosuppressant. We present 3 case reports of success with tacrolimus ointment 0.1%.

## Case Reports

**Patient 1**—An 82-year-old woman with Crohn disease developed peristomal dermatitis under the upper right portion of the stoma wafer 12 years after a colon resection and colostomy, which was believed to be an irritant dermatitis related to the wafer (Figure 1A). A use test of the adhesive wafer on the arm failed to confirm a true contact allergy. The patient had not been using systemic or topical immunosuppressants. To alleviate the problem, we applied tacrolimus ointment 0.1% once daily to the inflamed area 30 minutes before each ostomy wafer change. After 3 weeks of therapy, her symptoms were completely resolved (Figure 1B).

**Patient 2**—A 70-year-old man with ulcerative colitis and pyoderma gangrenosum presented with a new pyoderma gangrenosum ulceration near his peristomal site from external trauma (Figure 2A). A trial of topical steroids for 6 weeks was not helpful. Tacrolimus ointment 0.1% was applied daily or every other day for 8 weeks, resulting in complete resolution of the ulceration (Figure 2B). The ulcer has not recurred in the 2 years since treatment.

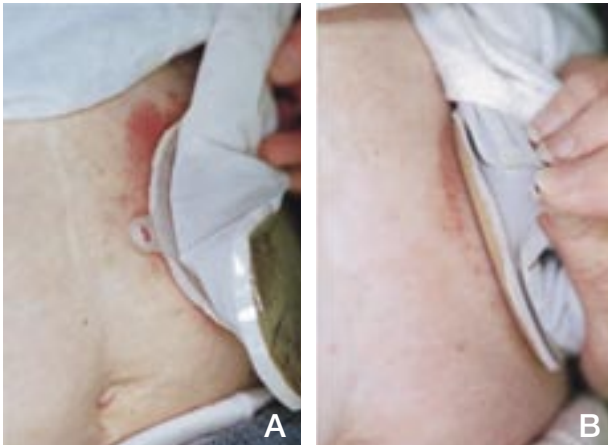
**Patient 3**—A 77-year-old woman had a urostomy bag placed after her bladder was removed from a carcinoma. She subsequently developed an irritation at the upper right portion of the ostomy site, which eventually became inflamed and ulcerated. The lesion was believed to have resulted from a poorly fitting stoma wafer. Triamcinolone acetonide cream 0.1% was applied daily for more than 3 weeks with natural occlusion of the adhesive stoma wafer. The inflamed ulceration had improved substantially with topical steroid therapy; however, atrophy at

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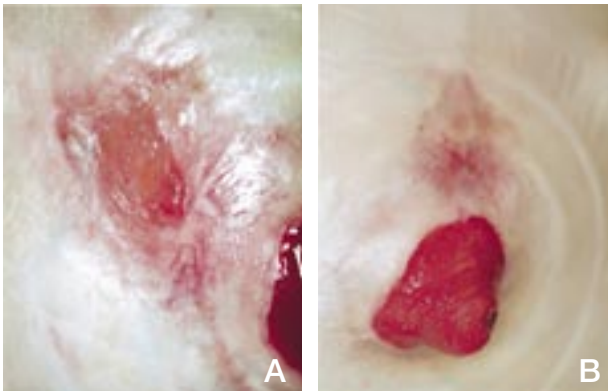
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**Figure 1.** Irritant peristomal dermatitis before therapy (A). Substantial improvement of irritant dermatitis after 3 weeks of therapy with tacrolimus ointment 0.1% (B).



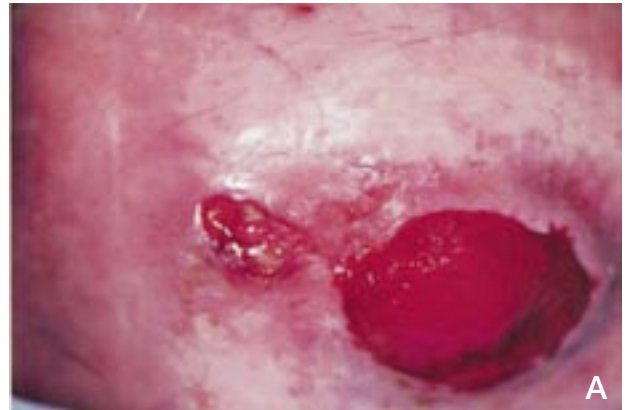
**Figure 2.** Pyoderma gangrenosum ulceration from external trauma at peristomal site (A). Complete resolution of ulceration after 8 weeks of therapy with tacrolimus ointment 0.1% (B).

the ulcer site was clinically apparent at dermatologic evaluation (Figure 3A). The patient was switched to tacrolimus ointment 0.1% once daily to avoid further atrophy. After 3 months of therapy, the steroid atrophy and ulceration had resolved (Figure 3B).

### Comment

Tacrolimus ointment 0.1% is a T-cell immunosuppressant that inhibits intranuclear phosphatase calcineurin.<sup>5-7</sup> It currently is approved by the US Food and Drug Administration (FDA) for the treatment of moderate to severe atopic dermatitis<sup>8-12</sup> but has been shown to be effective for treating a variety of inflammatory skin conditions.<sup>13-17</sup>

The main advantage of tacrolimus ointment 0.1% is that it is not a steroid. Patients with chronic skin conditions requiring daily or continual application of topical steroids can develop striae, purpura, atrophy, and ulceration.<sup>18</sup> A nonsteroidal compound



**Figure 3.** Steroid atrophy at urostomy stoma site before therapy with tacrolimus ointment 0.1% (A). Resolution of atrophy and ulceration after 3 months of therapy with tacrolimus ointment 0.1% (B).

such as tacrolimus ointment 0.1% offers the benefit of long-term use without these drawbacks.

Most patients with peristomal skin diseases have an inflammatory or irritant component.<sup>1-3</sup> In areas where occlusion is required, even for short periods, the use of steroids should be avoided.<sup>4,18</sup> All 3 patients benefited from tacrolimus ointment 0.1%. For patient 3, switching from a steroid to tacrolimus was motivated by the steroid's atrophic effects. We are not implying that topical steroids do not have utility in peristomal skin disease<sup>18</sup>; however, in these 3 patients with peristomal skin disease, treatment with a nonsteroidal agent such as tacrolimus ointment 0.1% offered sufficient immunosuppression, without the adverse effects noted with topical steroids such as steroid atrophy. These cases also demonstrated that tacrolimus ointment 0.1% can be effective in treating various types of peristomal skin disease, including irritant reactions and inflammatory conditions.

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