and grains, hyperkeratosis, and parakeratosis. Both present clinically with hyperkeratotic papules and warty plaques but differ in their age of onset and associated abnormalities. ADEN is often congenital, while DD typically manifests in the second or third decade of life. Typically, DD has associated nail abnormalities, mucous membrane involvement, palmoplantar pits, and punctate keratoses, while ADEN does not.2

Genetic testing is available, as is immunohistochemical staining of tissue for SERCA2 protein expression. The genetic difference between the 2 disorders remains controversial. Darier disease is caused by mutations in ATP2A2, which encodes the SERCA2 pump. Mutations of SERCA2 have been discovered in at least 2 patients with ADEN, leading some clinicians to classify ADEN as segmental DD resulting from postzygotic mosaicism.3 Others maintain that congenital or early childhood onset and linear distribution suggest ADEN and not segmental DD.4 There is 1 reported case of a patient where lack of ATP2A2 mutation was confirmed by DNA analysis.5

In our patient, IHC staining identified SERCA2 protein in lesional skin. However, the IHC staining does not substantiate normal function of the protein. Genetic testing was not economically feasible for this family but may be appropriate when a patient desires genetic counseling, prenatal diagnosis, or identification of at-risk family members. The Genetic Testing Registry lists several laboratories that will perform sequence analysis of the ATP2A2 gene.6 With 96% specificity, the lack of ATP2A2 gene mutation nearly excludes a diagnosis of DD. Our case supports the premise that ADEN has clinical and prognostic features distinct from DD despite their overlapping histopathologic findings. Although IHC staining of SERCA2 can be helpful, further study of genotype-phenotype correlations may allow better distinction of these 2 clinical entities.

Olushola Akinshemoyin Vaughn, BA
Molly A. Hinshaw, MD
Joyce M. Teng, MD, PhD

Author Affiliations: University of Wisconsin School of Medicine and Public Health, Madison (Akinshemoyin Vaughn); Department of Dermatology, University of Wisconsin, Madison (Hinshaw); Dermatopathologist, Dermpath

Severe Acne in Female-to-Male Transgender Patients

The number of patients diagnosed as having gender identity disorders (GIDs) has increased in the past decade. Sexual minorities receive little dermatologic interest, although they have specific skin disorders.1 Female-to-male transsexual patients (trans men) receive masculinizing doses of testosterone (T) to induce virilization.2 Our knowledge of the effects of T therapy on the skin of trans men is scarce,3 and very little has been published about it. Previous works conclude that T therapy used in trans men does

Figure 1. Child With Acantholytic Dyskeratotic Epidermal Nevus (ADEN)

Typical cutaneous findings in ADEN include verrucous papules and plaques, often following the lines of Blaschko. This patient had linear involvement of the left lower extremity.

Figure 2. Immunohistochemical Staining of Lesional Skin Using SERCA2

This photomicrograph demonstrates that lesional skin tested positive under sarcoendoplasmic reticulum calcium transport ATPase 2 (SERCA2) immunohistochemical stain (1:100 dilution; Abcam PLC), favoring a diagnosis of ADEN over Darier disease in our patient (original magnification ×400).
not lead to troublesome cases of acne. However, our experience in a referral center for GID has shown otherwise.

**Report of Cases** | Case 1. A trans man in his 20s with a history of mild acne during adolescence presented with inflammatory acne with scarring in the face and chest of 4 months’ duration that had not responded to topical retinoids. He had begun T therapy 6 months before (testosterone undecanoate, 1000 mg every 3 months), with adequate virilization that included facial hair growth and suppression of menses. Blood T levels were 505.6 ng/dL.

He started treatment with oral isotretinoin (30 mg/d), and after 9 months, the acne had completely resolved. Three months after treatment was discontinued, the acne recurred and required retreatment with isotretinoin, 20 mg/d, which was ongoing at last follow-up with good response.

Case 2. A trans man in his 20s with no relevant dermatologic history was referred for severe acne on his face and trunk and seborrhea, all of which had appeared 6 months after he began standard T treatment (testosterone undecanoate, 1000 mg every 3 months). The patient had developed secondary male characteristics, namely facial and body hair growth. His T levels after starting hormonal treatment were 496 ng/dL.

He received treatment with isotretinoin, 20 mg/d, for 8 months with complete resolution of the acne but persistence of scarring. Six months after discontinuation of treatment, he presented with a new acne outbreak resistant to oral doxycycline that required retreatment with isotretinoin (20 mg, 3 times a week), which was ongoing at last follow-up with good response and tolerance.

**Discussion** | To our knowledge, only 2 studies have investigated the effects of sex steroid treatment on the skin of trans men. Wierckx et al concluded that most cases of T-induced acne occurred within the first 6 months and subsequently improved. However, our patients presented with severe, isotretinoin-dependent acne even 1 year after beginning hormonal treatment. We cannot explain the acne remission reported by Wierckx et al. They propose that it may be due to acne treatments used by several of their patients, or alternatively, it may indicate that initial acne lesions caused by male T levels in born-female patients attenuate over time. In our opinion, it is reasonable to think that if the patient keeps receiving masculinizing doses of T, virilizing characteristics such as acne will persist. The fact that continuous isotretinoin was required over the long term is not surprising; isotretinoin seems to be effective while the patient is taking it, but the acne recurs when the treatment is discontinued, since the causative factor (excess T) is still present.

In previous studies, most trans men developed only mild acne, with mild or no scarring, suggesting that severe, long-term skin adverse effects are rare in this population. However, our 2 patients developed severe inflammatory acne with scarring, even with physiological male T levels. The goal of T therapy is to ensure T levels within physiological male ranges (320-1000 ng/dL). Although one could argue that tapering the T dose would improve the acne lesions, there is a wide inter-individual variability in androgen effects. Wierckx et al demonstrated that dermatological outcome was not related to individual serum T levels. We believe that personal susceptibility plays a crucial role in the acne development after cross-sex hormone therapy.

In conclusion, previous data support that severe skin problems are rare after long-term T treatments. However, we present 2 cases of severe acne in trans men that required continuous isotretinoin therapy. Special requirements of patients with GID and their dermatological problems during sex hormone treatment are important to address because of their potential to disrupt the hormone treatment process.

Lucia Turrion-Merino, MD
Marta Ureh-García-de-la-Vega, MD
Laura Miguel-Gomez, MD
Antonio Harto-Castaño, PhD, MD
Pedro Jaen-Olasolo, PhD, MD

**Author Affiliations:** Dermatology Department, Ramón y Cajal Hospital, Madrid, Spain.

**Corresponding Author:** Lucia Turrion-Merino, MD, Dermatology Department, Ramón y Cajal Hospital, Carretera Colmenar Viejo km 9100, 28034 Madrid, Spain (luciaturrion@gmail.com).

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**Pott’s Puffy Tumor Caused by Chronic Sinusitis Resulting in Sinocutaneous Fistula**

Pott’s puffy tumor was reported first in 1760 as a forehead swelling and frontal bone osteomyelitis in association with an epidural abscess, one of the most dangerous complications of frontal sinusitis. To our knowledge, however, only 2 cases of Pott’s puffy tumor have been reported in the English dermatologic literature. Herein, we report a case of Pott’s puffy tumor caused by chronic sinusitis that resulted in a sinocutaneous fistula.

**Report of a Case** | An otherwise healthy 52-year-old Japanese woman presented with a 2-year history of a swelling of her right upper eyelid, which had discharged pus for the previous 10 months without any trauma to her head. She denied any symptoms, including fever, headache, or nasal discharge. Physical examination revealed an immovable scarlike node, 11 × 7 mm.