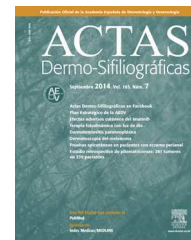




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CASE AND RESEARCH LETTERS

Hypertrophic and Keloid Scars After the Application of 5% Imiquimod Cream: A Report of 2 Cases[☆]



Cicatriz hipérftrica y queloide después de la aplicación de imiquimod 5% crema. A propósito de 2 casos

To the Editor:

Imiquimod 5% is a drug approved by the US Food and Drug Administration (FDA) for the topical treatment of genital warts, actinic keratosis, and basal cell carcinoma (BCC). While this drug is commonly used in daily clinical practice, no reports to date have associated its administration with alterations in scar formation.

We describe 2 cases of abnormal scar formation after treatment with imiquimod 5% cream.

Patient 1

The patient was a 32-year-old man with no drug allergies and no relevant past medical or surgical history. He presented with a lesion in the right pectoral region that had developed

2 years previously and had been treated with antifungals for a suspected fungal infection. Examination revealed an erythematous desquamative plaque of 2 cm in diameter consistent with Bowen disease. The patient was treated with imiquimod 5% cream once daily, Monday through Friday, for 6 weeks. Sixty days after starting treatment the patient developed in the treated area a raised, pearly, linear lesion with superficial telangiectasias, surrounded by a halo of atrophic and hypopigmented skin (Fig. 1A). Based on these findings it was decided to perform a skin biopsy of the lesion for histopathological analysis. This revealed a focally granulomatous, nonspecific, chronic inflammatory process, with fibrotic scarring and the absence of malignant neoplastic elements, ruling out a tumoral process and leading to a diagnosis of hypertrophic scarring.

Treatment with topical corticosteroids and silicone gel sheets resulted in flattening of the lesion and a reduction in both pruritus and telangiectasias, but hypochromia and atrophy persisted 9 months after treatment (Figs. 1B and 3C).

Patient 2

The patient was a 71-year-old woman with no known drug allergies and a medical history of dyslipidemia, osteoarthritis, and pollinosis. She had no past surgical history. She presented with a pearly lesion of 1 cm in diameter in the left



Figure 1 A, First examination of the patient after imiquimod administration. A raised linear lesion can be seen. B and C, Examination of the patient at 6 and 9 months, respectively. Note the improvement after treatment.

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Figure 2 A, Basal cell carcinoma; image taken before starting treatment. B, Large, indurated plaque with 3 linear elastic elements; image taken 2 months after starting imiquimod treatment. C, The lesion persists, but with reduced erythema.

pectoral region that had developed 2 years previously. Dermoscopy revealed central keratosis and thick telangiectasias (Fig. 2A). A diagnosis of superficial BCC was established and treatment was initiated with imiquimod 5% cream once daily, Monday through Friday, for 6 weeks.

Two months later the patient developed an erythematous, indurated, and slightly painful plaque containing 3 branched linear elements of elastic consistency. The plaque was 7 cm in diameter, extending beyond the area of the initial tumor. A clinical diagnosis of keloid after application of imiquimod 5% cream was established (Fig. 2B).

Treatment with topical corticosteroids for 2 months resulted only in a reduction in erythema (Fig. 2C).

Imiquimod 5% cream is indicated for genital warts, superficial BCC, and actinic keratosis.¹ However, its off-label use in numerous dermatologic conditions has produced favorable results.^{2,3}

The most common local secondary effects are erythema, pruritus, burning, ulceration, erosion, crusting, and flaking, and the most commonly described systemic symptoms are headache, fatigue, fever, malaise, pains, nausea, diarrhea, and joint pain.^{4,5}

Imiquimod has been proposed as an alternative treatment in areas in which surgery is technically difficult, specifically because of the better aesthetic results obtained. It has even been proposed for the treatment of

hypertrophic scars and keloids.^{6,7} However, it is important to be aware that inflammation is often associated with imiquimod administration. This inflammatory reaction, which varies in intensity and nature, can even cause hypertrophic scars or keloids in anatomic areas that are prone to scarring (pectoral region, sternum, clavicle, etc.)

In the cases described here the lesions were located on the anterior surface of the chest. This area is prone to hypertrophic scarring and keloids, which should be borne in mind when prescribing imiquimod in these locations.

As neither of the patients had any relevant history of surgery or trauma, it was impossible to ascertain their predisposition to impaired scar formation. However, both patients developed severe inflammation in keloid-prone areas, which may account for the observed clinical course.

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The Utility of Skin Ultrasound for the Diagnosis of Complications of Tissue Filler Materials[☆]



Utilidad de la ecografía cutánea en el diagnóstico de las complicaciones por materiales de relleno

To the Editor:

The increase in the number of cosmetic procedures in recent years means that in our daily practice we are seeing ever more side effects of the different techniques. One of these is the formation of granulomas secondary to dermal fillers; the etiology of these lesions can be difficult to determine, not only because patients neglect to inform us they have undergone cosmetic treatment or they are unaware of the type of material used, but also because the clinical presentation can be similar to that of certain dermatologic diseases.¹ When medicolegal issues arise, the most useful additional test is biopsy, as each material presents a specific histologic pattern,² but this is an invasive technique and patients may sometimes reject such tests. Skin ultrasound is an alternative, non-invasive test that, through specific sonographic patterns, can identify the type of material involved and its exact site.

We present the case of a 52-year-old woman who came to outpatients for multiple asymptomatic lesions on the forehead. The first lesions had appeared in the glabellar region 8 years earlier and had remained stable until the year prior to consultation when, coinciding with the appearance of new lesions, she developed recurrent episodes of inflammation that persisted for several days and resolved spontaneously. Physical examination revealed yellowish-pink plaques of 1–2 cm diameter, with well-defined borders, a firm consistency, and a peau d'orange appearance (Fig. 1). The only finding of interest in the patient's past history was the injection of a filler material 14 years earlier; she was unable to spec-

ify what the material was. On biopsy there were abundant foamy histiocytes suggestive of a histiocytic reaction to the filler material (Fig. 2). Due to the lack of specific findings, we decided to perform skin ultrasound to identify the filler material employed. The study revealed hyperechoic



Figure 1 Yellowish-pink plaques of variable size and with well-defined borders on the forehead.

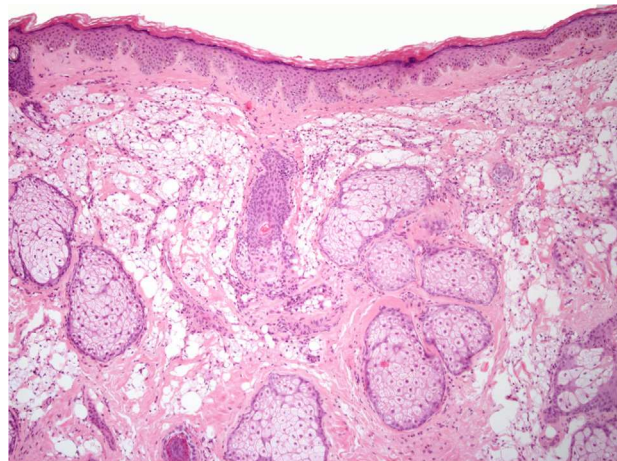


Figure 2 Skin with abundant foamy histiocytes (some with microvacuoles and others with macrovacuoles) in the reticular dermis, suggestive of a histiocytic reaction to a filler material (hematoxylin-eosin, original magnification $\times 10$).

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