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CASE FOR DIAGNOSIS

Cluster of Erythematous Nodules on the Trunk

Nódulos eritematosos agrupados en el tronco

Clinical History

A 42-year-old woman was seen for a 5-year history of nodular lesions grouped on the left side of the back; the lesions were stable and were slightly pruritic. On questioning about her personal and family history, the patient reported that she had undergone hysterectomy 32 years earlier for myomatosis. Of her 6 siblings (2 brothers and 4 sisters), one brother had similar skin lesions, though they were widespread on the trunk and limbs. Her mother and one of her sisters had undergone hysterectomy for uterine myomatosis.

Physical Examination

Physical examination revealed multiple, firm, hemispheric, erythematous nodules of 2 to 5 mm in diameter grouped in the left dorsal region, forming a plaque of 10 by 4 cm (Figure 1); they were adherent to the deep tissues. No further lesions were found on examination of the rest of the skin.



Figure 1 Firm, erythematous nodules of 2 to 5 mm diameter, adherent to the deep planes, grouped in the left dorsal region.

Histopathology

Biopsy of a nodule showed abundant, interwoven fascicles of spindle cells with rounded, elongated central nuclei, running through the deep and middle dermis (Figures 2 and 3).

Additional Tests

Laboratory tests including complete blood count, biochemistry, and tumor markers were normal. Abdominal ultrasound was performed, showing no significant abnormalities.



Figure 2 Nonencapsulated dermal tumor formed of interwoven fascicles. Hematoxylin-eosin, $\times 10$.

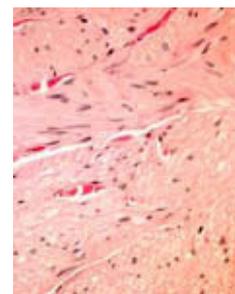


Figure 3 Bundles of spindle cells with eosinophilic cytoplasm and rounded, elongated nuclei. Hematoxylin-eosin, $\times 20$.

What is your diagnosis?

Diagnosis

Familial leiomyomatosis cutis et uteri (Reed syndrome).

Clinical Course and Treatment

The lesions only caused mild pruritus and, in view of their benign nature, it was decided not to perform any treatment. The patient comes to our outpatient clinic for yearly follow-up of the skin lesions and to perform screening for possible associated tumors.

Comment

The clinical picture that combines familial or hereditary multiple cutaneous leiomyomas and uterine leiomyomas is called familial leiomyomatosis cutis et uteri or Reed syndrome. This is an autosomal dominant hereditary disorder with incomplete penetrance, caused by heterozygotic germ line mutations in gene *1q42.3-43*. This gene codes for fumarase, a mitochondrial enzyme of the Krebs cycle that catalyzes the conversion of fumarate to malate and acts as a tumor suppressor.¹ Between 1% and 14% of individuals with mutation of the fumarase gene also develop renal cell carcinoma. This is a variant known as hereditary leiomyomatosis and renal cell cancer.² The renal cell carcinoma is usually a cystic or papillary carcinoma that develops in the third or fourth decade of life and tends to present an aggressive course with early metastatic spread.³

The piloleiomyoma is a benign skin tumor that arises from the arrector smooth muscle of the hair. It can be solitary or multiple. Multiple piloleiomyomas tend to appear on the trunk with a grouped, linear, or metameric pattern, presenting as smooth, hard, reddish-brown, hemispheric papules or nodules of 1 to 20 mm in diameter, adherent to the deep planes; the lesions can coalesce to form plaques with an uneven surface. They are frequently associated with pain triggered by cold, light friction, pressure, trauma, or emotions. The typical clinical course of these tumors shows a progressive increase in the number and size of the lesions, though they remain confined to the area in which they initially appeared. A number of skin tumors must be considered in the differential diagnosis, such as multiple grouped dermatofibromas, schwannomas, neurofibromas, adnexal tumors, and metastases.⁴

Histologically they are seen as nonencapsulated dermal tumors with an unaffected subepidermal band. They are formed of interweaving fascicles of spindle cells with an eosinophilic cytoplasm, rounded, elongated (cigar-shaped) central nuclei, and perinuclear vacuoles.⁴

The treatment of these skin lesions is symptomatic or cosmetic. In general, the measures that are required

involve cosmetic concealment and avoidance of the pain-triggering factors. Another option is surgical excision, although recurrence is common. Treatments with α -blockers (phenoxybenzamine),⁶ calcium antagonists (nifedipine),⁵ glyceryl trinitrate,⁶ gabapentin,⁶ and analgesics⁶ have been tried, and a case report was recently published of treatment with botulinum toxin.⁷ Whichever therapeutic option is chosen, the most important aspects are to warn the patient of the risk of appearance of renal cell carcinoma and to perform periodic follow-up with imaging studies.

The case that we present appears to be both clinically and histologically compatible with Reed syndrome. It was the patient's decision not to undergo treatment, but follow-up is being continued to screen for associated tumors.

Conflicts of Interest

The authors declare no conflicts of interest.

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