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CASE REPORT

Lipedematous Scalp

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Abstract. Lipedematous scalp is a rare condition first described by Cornbleet in 1935. An increased thickness of subcutaneous tissue in the scalp gives rise to a soft spongy appearance of the surface and occasionally causes pruritus and pain in the affected area. When hair loss is also associated with the condition, it is described as lipedematous alopecia. To date, 10 cases of lipedematous scalp and 13 of lipedematous alopecia have been reported.
We present the case of a 77-year-old white women who developed dysesthesia on her scalp 5 months after the death of her husband. Biopsy revealed subcutaneous tissue thickening that even extended to the dermis. Computed tomography showed thickening of subcutaneous tissue at the vertex and in the occipital region. We diagnosed a new case of lipedematous scalp in a white women. This case highlights the importance of differential diagnosis in cases of dysesthetic syndrome of the scalp.

Key words: lipedematous scalp, dysesthetic syndrome of the scalp, lipedematous alopecia.

CUERO CABELLUDO LIPEDEMATOSO

Resumen. El cuero cabelludo lipedematoso es una rara entidad que fue descrita por Cornbleet en 1935, en la que un aumento del tejido subcutáneo del cuero cabelludo produce un aspecto suave y esponjoso de la superficie del mismo y ocasionalmente prurito y dolor de la zona afectada. Cuando además esta condición produce alopecia se denomina alopecia lipedematosa. Hasta la fecha se han descrito 10 casos de cuero cabelludo lipedematoso y 13 de alopecia lipedematosa.
Presentamos el caso de una mujer de 77 años de raza caucásica con sensación disestésica en el cuero cabelludo 5 meses después de la muerte de su esposo. Realizamos una biopsia donde se observaba un engrosamiento del tejido graso subcutáneo que incluso se extendía a la dermis. Una tomografía computarizada mostraba este engrosamiento de los tejidos subcutáneos en el vértex y el área occipital. Diagnosticamos un nuevo caso de cuero cabelludo lipedematoso en una mujer caucásica, destacando la importancia del diagnóstico diferencial con el síndrome disestésico del cuero cabelludo.

Palabras clave: cuero cabelludo lipedematoso, síndrome disestésico del cuero cabelludo, alopecia lipedematosa.

Introduction

Lipedematous scalp is characterized by diffuse thickening of the subcutaneous tissue not accompanied by hair abnormalities. Since it was first described by Cornbleet[1] in 1935, 10 cases have been reported in the literature. Lipedematous alopecia, on the other hand, is defined as a thickening of the subcutaneous tissue in an area of the scalp accompanied by an inability of hair shafts to grow more than a few centimeters. Both conditions are more common in women. We present a case of lipedematous scalp in a 77-year-old white woman.

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Case Report

A 77-year-old white woman on diuretic treatment for hypertension came to our outpatient clinic for a 2-month history of dysesthesia and pruritus over the vertex and parieto-occipital areas of the scalp; she also reported pain when combing her hair. On physical examination, the scalp was found to be slightly erythematous, thickened, soft, and boggy, with a degree of edema in the areas mentioned by

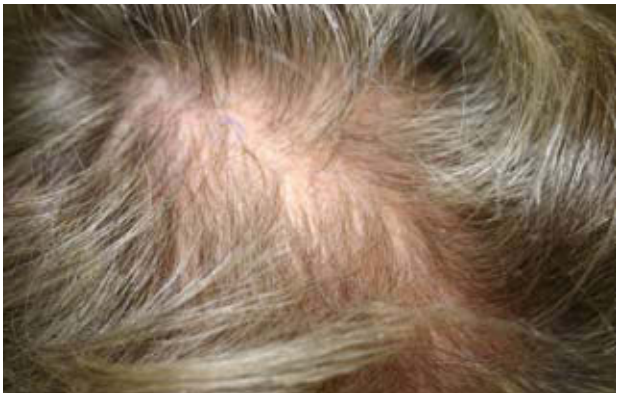

Figure 1. This clinical picture shows virtually no abnormalities. Mild erythema of the scalp.

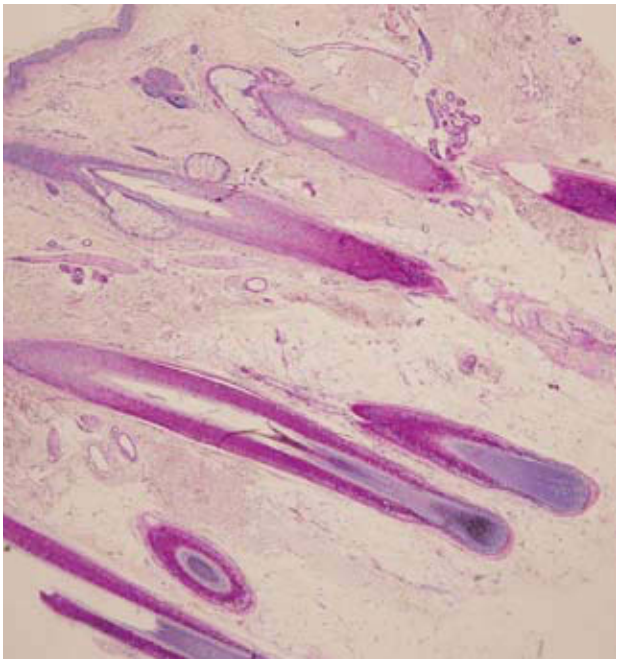

Figure 2. Scalp biopsy showing thickened subcutaneous tissue that extends to the dermis, with normal morphology of the hair follicles and epidermis (hematoxylin-eosin, ×4).

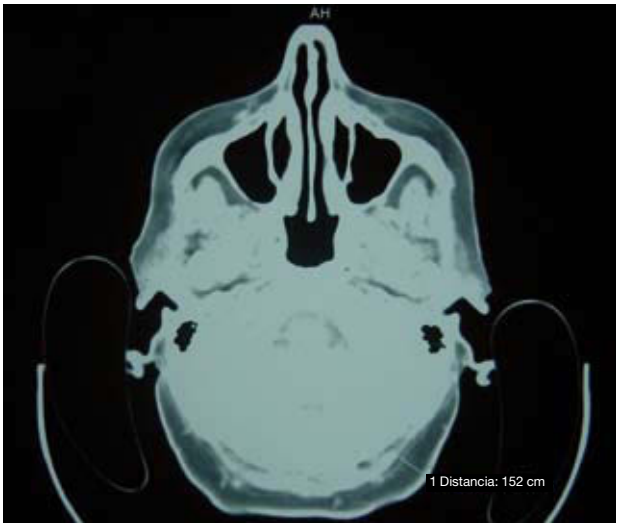

Figure 3. Computed tomography scan showing the thickened subcutaneous tissue of the scalp (1.52 cm in the occipital region).

the patient. The abnormalities were palpable rather than visible (Figure 1). The scalp could be easily pressed against the underlying bone, but immediately assumed its original form once the pressure was withdrawn. There was no inflammation, brittle hair, or alopecia. The hair-pull test was negative and the nails were normal. There was no enlargement of the locoregional lymph nodes.

Because the dysesthesia had begun 5 to 6 months after the death of the patient's husband, a psychiatric assessment was performed to rule out dysesthetic syndrome of the scalp, with the conclusion that the dermatologic condition was not due to a psychopathologic abnormality; however, mild depression related to her husband's death was diagnosed but did not require treatment.

Biopsy of an affected area of the scalp revealed thickening of the subcutaneous tissue due to hyperplasia that extended as far as the dermis. Dermal edema and a mild perivascular lymphocytic infiltrate in the superficial dermis were also observed (Figure 2). No mucin deposits were found in the dermis or subcutaneous tissue (Alcian blue negative), and the epidermis and hair follicles were normal. Computed tomography showed diffuse thickening of the subcutaneous tissue at the vertex and in the occipital areas that measured 1.52 cm (Figure 3).

The routine blood and biochemistry tests, antinuclear antibodies, and thyroid profile were normal or negative.

Based on these data, we diagnosed lipedematous scalp.

Discussion

Lipedematous scalp is a rare condition that was first described by Cornbleet in 1935[1] in a black woman. In 1961, Coskey et al[2] introduced the term lipedematous alopecia to describe 2 patients who presented thickening of the subcutaneous tissue of the scalp and inability of the hair to grow longer than 2 cm.

A total of 10 cases of lipedematous scalp[1,3-10] and 13 of lipedematous alopecia,[2,6,7,10-16] including the initial descriptions, have been reported to date (Table). Patients report diffuse pain, paresthesias, or itching, and a boggy, cotton wool-like texture of the scalp, as well as localized or generalized thickening. On physical examination, the changes are palpable rather than visible; on occasions, mild

Table 1. Cases of Lipedematous Scalp and Alopecia Described to Date

Authors/Year	*Age, y/Sex/ Race*	*Thickness*	*Condition*
Cornbleet[1]/1935	44/F/B	?	LS
Coskey et al[2]/1961	2/F/B	15	LA
	75/F/B	10	LA
Curtis and Heising[11]/ 1964	62/F/B	15	LA
Lee et al[3]/1994	32/F/B	10.7	LS
Kane et al[12]/1998	49/F/B	12.6	LA
Fair et al[13]/2000	18/F/B	9	LA
Bridges et al[14]/2000	48/F/B	12	LA
Ikejima et al[15]/2000	30/M/A	16	LA
Tiscornia et al[16]/2002	69/F/W	10	LA
Scheufler et al[4]/2003	51/F/W	15	LS
Bukhari et al[5]/2004	57/F/A	19.2	LS
Martín et al[6]/2005	48/F/W	10.8	LS
	77/F/W	11	LA
	59/F/W	9.2	LA
High and Hoang[7]/2005	57/F/B	12-15	LA
	55/F/B	10-15	LS
Rowan et al[8]/2006	6 months/F/B	9.8	LS
Piraccini et al[9]/2006	48/M/W	11	LS
	55/M/W	12	LS
Yasar et al[10]/2007	62/F/W	18	LS
	45/F/W	10	LA
	49/M/W	12	LA
Martínez-Morán/2007	77/F/W	15	LS

Abbreviations: A, Asian; B, black; F, female; LA, lipedematous alopecia; LS, lipedematous scalp; M, male; W, white.

erythema is observed, and an irregular appearance of the scalp resembling cutis verticis gyrata has been reported in some cases.[10] In lipedematous alopecia, all of these symptoms are associated with diffuse hair loss, or with short hair that fails to grow more than a few centimeters in the affected areas.[9] Both conditions mainly affect the area of the vertex, but can affect the parietal regions. The degree of hair loss in lipedematous alopecia is variable, but is usually mild at onset and becomes progressively more severe.[13] In these disorders, scalp thickness has been measured using various methods—sterile needles, ultrasound, magnetic resonance imaging or, as in our patient, computer tomography—and values between 9 and 19 mm have been reported, compared with a mean (SD) of 5.8 (0.12) mm at the bregma in healthy adults.[14]

In lipedematous scalp, the histopathologic findings include thickening of the subcutaneous tissue due to hyperplasia, and dermal edema. In lipedematous alopecia, the macroscopic findings include the same subcutaneous tissue thickening resulting from subcutaneous tissue expansion in the absence of hypertrophy or hyperplasia of the adipose tissue, mild hyperkeratosis, and a perivascular lymphocytic infiltrate.[2,4,11-16]

The precise pathogenesis of lipedematous alopecia and lipedematous scalp is not clear. Most patients are healthy and have no personal history of interest. The large number of cases recently reported in white and Asian patients has diminished the role of racial factors in the pathogenesis of these diseases, which were initially reported in black patients. Most cases occur in women; this suggests that hormonal factors may play an important role in the pathogenic mechanisms. However, Ikejima et al[15] believe that lipedematous alopecia may be incorrectly diagnosed as androgenetic alopecia in men.

Scheufler et al[4] suggest that the first abnormality in lipedematous scalp is hyperplasia of the subcutaneous tissue, rather than edema. Bridges et al[14] believe that this increased subcutaneous tissue could increase the pressure on the hair follicles, thereby shortening the hair growth or anagen cycles, leading to slower growth in lipedematous alopecia, whereas Martín et al[6] found dilated dermal lymphatic vessels in 2 patients with lipedematous alopecia. There is some debate about whether the 2 disorders are different or whether they are clinical variants of the same disease. We believe that the findings encountered in most patients suggest that lipedematous scalp is not the precursor of lipedematous alopecia.

In the differential diagnosis we included a dysesthetic syndrome of the scalp, which could be considered among the chronic cutaneous dysesthesias. The condition is described in women and is sometimes associated with psychiatric disorders, although it is not clear if the scalp problem precedes the psychiatric disorder or is caused by it[17]; patients report pain or itching of the scalp, but the symptoms are not accompanied by changes in the skin biopsy. This new case of lipedematous scalp in a white woman highlights the importance of differential diagnosis with dysesthetic syndrome of the scalp.

Conflicts of Interest

The authors declare no conflicts of interest.

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