CASE REPORT

Lipedematous Scalp

C. Martínez-Morán, C. Sanz-Muñoz, A. Miranda-Sivelo, I. Torné and A. Miranda-Romero
Servicio de Dermatología, Facultad de Medicina, Hospital Clínico Universitario, Valladolid, Spain

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 woman 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 woman. 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.

Introduction

Lipedematous scalp is characterized by diffuse thickening of the subcutaneous tissue not accompanied by hair abnormalities. Since it was first described by Cornbleet 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.

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
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could be easily pressed against the underlying bone, but immediately assumed its original form once the pressure was withdrawn.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 in a black woman. In 1961, Coskey et al. 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 and 13 of lipedematous alopecia, 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...
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.

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\(^\text{13}\) believe that lipedematous alopecia may be incorrectly diagnosed as androgenetic alopecia in men.

Scheufler et al\(^\text{14}\) suggest that the first abnormality in lipedematous scalp is hyperplasia of the subcutaneous tissue, rather than edema. Bridges et al\(^\text{14}\) 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 Martin et al\(^\text{13}\) 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\(^\text{17}\); 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.

**References**

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

<table>
<thead>
<tr>
<th>Authors/Year</th>
<th>Age, y/Sex/Race</th>
<th>Thickness</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combleet(^\text{1}/1935)</td>
<td>44/F/B</td>
<td>?</td>
<td>LS</td>
</tr>
<tr>
<td>Coskey et al(^\text{1}/1961)</td>
<td>2/F/B; 75/F/B</td>
<td>15; 10</td>
<td>LA</td>
</tr>
<tr>
<td>Curtis and Heising(^\text{11}/1964)</td>
<td>62/F/B</td>
<td>15</td>
<td>LA</td>
</tr>
<tr>
<td>Lee et al(^\text{1}/1994)</td>
<td>32/F/B</td>
<td>10.7</td>
<td>LS</td>
</tr>
<tr>
<td>Kane et al(^\text{1}/1998)</td>
<td>49/F/B</td>
<td>12.6</td>
<td>LA</td>
</tr>
<tr>
<td>Fair et al(^\text{12}/2000)</td>
<td>18/F/B</td>
<td>9</td>
<td>LA</td>
</tr>
<tr>
<td>Bridges et al(^\text{14}/2000)</td>
<td>48/F/B</td>
<td>12</td>
<td>LA</td>
</tr>
<tr>
<td>Ikejima et al(^\text{13}/2000)</td>
<td>30/M/A</td>
<td>16</td>
<td>LA</td>
</tr>
<tr>
<td>Tiscornia et al(^\text{16}/2002)</td>
<td>69/F/W</td>
<td>10</td>
<td>LA</td>
</tr>
<tr>
<td>Scheufler et al(^\text{14}/2003)</td>
<td>51/F/W</td>
<td>15</td>
<td>LS</td>
</tr>
<tr>
<td>Bukhari et al(^\text{15}/2004)</td>
<td>57/F/A</td>
<td>19.2</td>
<td>LS</td>
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<tr>
<td>Martin et al(^\text{16}/2005)</td>
<td>48/F/B; 77/F/W</td>
<td>10.8; 11</td>
<td>LS; LA</td>
</tr>
<tr>
<td>High and Hoang(^\text{17}/2005)</td>
<td>57/F/B; 55/F/B</td>
<td>12-15; 10-15</td>
<td>LA; LS</td>
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<tr>
<td>Rowan et al(^\text{18}/2006)</td>
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<td>9.8</td>
<td>LS</td>
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<tr>
<td>Piraccini et al(^\text{19}/2006)</td>
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<td>11; 12</td>
<td>LS; LA</td>
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<tr>
<td>Yasar et al(^\text{13}/2007)</td>
<td>62/F/W; 49/F/W</td>
<td>18; 10</td>
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<tr>
<td>Martínez-Morán et al(^\text{20}/2007)</td>
<td>77/F/W</td>
<td>15</td>
<td>LS</td>
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</table>

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