INTRODUCTION

Female androgenetic alopecia (FAGA) is a nonscarring alopecia characterized by progressive miniaturization of hair follicles that leads to the reduction of hair density. It affects mainly the parietal and vertex regions of the scalp with preservation of the anterior hair implantation line. However, it can also appear with recession of the anterior hairline known as FAGA with male pattern (FAGA-M). In these cases, it is important to consider a state of hyperandrogenism and look for other signs such as hirsutism, acne, and menstrual irregularities. A sudden onset in a postmenopausal woman must make us suspicious of an androgen-secreting tumor. We present two cases of FAGA-M secondary to an ovarian tumor that was successfully resolved after surgical treatment.

CASE REPORTS

Case 1

A 62-year-old woman presented with alopecia in the last year involving the biparietal scalp with recession of the anterior hairline [Figure 1a and 1b]. She also presented with hirsutism on her extremities and seborrhea. Hormonal profile showed normal levels of DHEA-S (10.73 μg/dL) and elevated serum total testosterone (658 ng/dl) being suspicious of an ovarian tumor. Pathology revealed a right ovarian Leydig cell tumor [Figure 1c]. She had a major improvement in her alopecia after the surgery, and minoxidil 5% lotion was prescribed [Figure 1d].

Case 2

A 73-year-old woman consulted for alopecia for 2 years involving the biparietal scalp with no preservation of the anterior hairline [Figure 2a and 2b]. She had normal levels of DHEA-S (36.66 μg/
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dL) and elevated serum total testosterone (609.7 ng/dl) suggestive of an ovarian tumor. A stromal luteoma was removed [Figure 2c]. At the follow-up, the patient had a partial improvement in the alopecia with a normal total plasma testosterone level [Figure 2d].

DISCUSSION

FAGA has a multifactorial etiology, being the genetics and the influence of androgens, the most important factors implicated. Dihydrotestosterone exerts its action in the dermal papilla causing a shortened hair cycle with progressive conversion of terminal follicles into vellus-like ones, known as miniaturization. In states of androgen excess, this process becomes even more accentuated, giving the appearance of FAGA-M.

When FAGA-M is suspected, it is important to look for other signs of hyperandrogenism such as hirsutism, seborrhea, acne, and menstrual irregularities. It is recommended to request a hormonal profile based on the main causes of hyperandrogenism according to the age of the patient and refer to the endocrinologist or gynecologist for further evaluation.

In Figure 3, we have summarized a diagnostic approach.

The most common causes of hyperandrogenism are different in premenopausal and postmenopausal women. In the first group, polycystic ovarian syndrome is by far the leading cause, followed by nonclassic congenital adrenal hyperplasia in a small proportion of women. In the second group, a new-onset state of androgen excess is rare, and it must be ruled out, an androgen-secreting tumor (ovarian or adrenal) as the main cause, followed by ovarian hyperthecosis. Ovarian tumors associated with androgen secretion mainly originate from the sex cord stroma and include Leydig tumor and stromal luteoma.

It is important that dermatologists be prepared to be the first medical contact for patients with signs of hyperandrogenism as FAGA-M, since it could be secondary to an underlying disease that requires treatment by the appropriate specialist.
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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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