Scalp psoriasis associated with central centrifugal cicatricial alopecia

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Abstract

Scalp psoriasis is a very common dermatological condition with a variety of presentations, but only rarely presents as severe alopecia. We present a case of a 50-year-old female with many years of recalcitrant hair loss that was thought to be secondary to central centrifugal cicatricial alopecia which was later diagnosed as psoriasis. This case highlights an interesting presentation and rare complication of a common disease.

Keywords: CCSA; Hair loss; Psoriasis; Scalp pruritus

1. Introduction

Scalp psoriasis, a disease characterized by sharply demarcated erythematous plaques with overlying scale, affects greater than 2% of the Western world (Van de Kerkhof and Franssen, 2001). Despite the prevalence of scalp psoriasis, very few cases of psoriasis causing scalp central centrifugal cicatricial (scarring) alopecia (CCCA) have been described (Almeida et al., 2013). Psoriatic scalp induced alopecia most commonly is non-cicatricial and affects only lesional skin; however, in addition to a few cases of cicatrical alopecia, it may also cause a generalized telogen effluvium (George et al., 2015).

2. Case report

A 50-year-old female presented to the dermatology clinic for follow-up of a multi-year history of hair loss secondary to recalcitrant CCCA. In the previous years, intralesional steroid injections (Kenalog 10 mg/cc), minoxidil, and Derma-smoothe oil (fluocinolone acetonide) had been used as treatment and had only resulted in intermittent mild improvements in hair loss. Additionally, she had a score of III B on the Seborrhea Area and Severity Index (SASI) scale (Smith et al., 2002). Over time there was progressive hair thinning, scalp pruritus, especially around the hair line, and scalp pain.

She was lost to follow-up for two years and upon returning to clinic, she had round, hyperkeratotic plaques with a rim of erythema scattered on the scalp and frontal hairline in the regions of the alopecia (Fig. 1a/b). A biopsy was consistent with psoriasis. The biopsy showed diminished number of terminal hair follicles, as well as naked hair shafts, with associated interstitial and perifollicular fibrosis (Fig. 2). There were also focal areas of granulomatous infiltrate. In the stratum corneum, there were overlying areas of parakeratosis and...
neutrophils. The periodic acid-Schiff (PAS) stain was negative, ruling out fungal infection (Fig. 3).

Following this psoriasis diagnosis, a trial of urea plus clobetasol ointment dramatically improved the scalp psoriasis by her two-week follow-up visit. The alopecia could not be reversed, but further scarring and secondary alopecia was prevented.

Figure 1. Hyperkeratotic plaques with rim of erythema on the (a) scalp and (b) frontal hairline with some hair regrowth following treatment.

Figure 2. H&E shows diminished terminal hair follicles and naked hair shafts with associated interstitial and perifollicular fibrosis.
3. Discussion

Rare cases of scarring alopecia due to scalp psoriasis have been reported. The first case of psoriatic alopecia was described in 1972, the scarring form or "destructive alopecia" was said to be the rarest type (Shuster, 1972). In 1990, three cases of scarring alopecia due to psoriasis were published (Wright and Messenger, 1990). These patients had a long history of scalp psoriasis ranging from 19–50 years with scarring alopecia both clinically and histologically, and had no return of hair after better control of scalp psoriasis (Wright and Messenger, 1990).

Other cases described include that of an 18-year-old female with a 6-year history of hair loss and no known past history of psoriasis (Van de Kerkhof and Chang, 1992). The area around the hair loss had silvery scale, and biopsy suggested psoriasis causing scarring alopecia (Van de Kerkhof and Chang, 1992). Finally, a study examining 47 patients with alopecia secondary to psoriasis had five patients that developed scarring alopecia without hair regrowth (Runne and Kroneisen-Wiersma, 1992).

A case series (n = 4) showed biopsy-proven CCCA in patients with chronic plaque psoriasis. Histopathologic findings of sebaceous gland atrophy and inflammatory infiltrates around the isthmic and infundibular areas amid a background of psoriatic changes suggested psoriatic alopecia (Bardazzi et al., 1999). A 42-year-old Brazilian woman, with a 22-year history of scalp psoriasis had a five-year history of diffuse hair loss (Almeida et al., 2013). It was initially thought that the scarring was secondary to years of scratching and secondary infection, but histopathologic examination confirmed CCCA associated with psoriasis (Almeida et al., 2013).

In review of the literature, it was noted that many patients with scalp scarring associated with psoriasis had a long history of severe plaque psoriasis, though this was not always the case. An HIV-positive male developed psoriasis with scarring alopecia in only five weeks (Schön et al., 2000). Additionally, familial psoriatic scarring alopecia has been described (Cockayne and Messenger, 2001). In this family, the grandmother had a 35-year history of psoriasis with a 30-year history of alopecia. The daughter, granddaughter, and son all had different levels of psoriatic alopecia as well (Cockayne and Messenger, 2001).

In summary, scarring alopecias, including CCCA, are rarely associated with scalp psoriasis. This highlights the...
importance of expanding the differential in recalcitrant disease so that patients can get symptomatic relief and delay disease worsening.

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Conflict of interest

The authors have no conflicts of interest to declare.

References


