Folliculitis decalvans of the scalp: Response to triple therapy with isotretinoin, clindamycin, and prednisolone

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SUMMARY

Folliculitis decalvans of the scalp is a recurrent, purulent follicular inflammation leading to scarring alopecia. We report on a 27-year-old man with folliculitis decalvans successfully treated with a combination of isotretinoin, corticosteroids, and clindamycin.

Introduction

There are two major scalp diseases dominated by neutrophilic inflammation (1): dissecting cellulitis of the scalp, also known as perifolliculitis capitis abscedens et suffodiens (2), and folliculitis decalvans (3). Both are neutrophilic scalp diseases with recurrent, painful, and suppurative follicular inflammation causing scarring hair loss that is often compared to deforestation by forest fire.

Dissecting folliculitis of the scalp can be associated with acne conglobata and/or acne keloidalis nuchae (inverse acne). In rare cases, sternocostoclavicular hyperostosis (SAPHO syndrome) (4) or osteomyelitis of the skull (5) can be found. Folliculitis decalvans is thought to be due to an abnormal host response to *Staphylococcus aureus*. Whether staphylococcal infection is a primary (6) or secondary manifestation is still a matter of debate (7).

In a subset of patients with folliculitis decalvans, tufted hair folliculitis is the major presentation (8). The treatment remains a challenge even in view of new developments during the last decade.

Case report

A 27-year-old Caucasian man presented with a purulent, tufted hair folliculitis resulting in scarring alopecia of the scalp (Figure 1). He had suffered from this disease since the age of ten and had had various but disappointing treatments. The prednisolone and ampicillin previously applied resulted in only short-term improvements. He had no signs of acne. Concomitant internal or skin diseases were excluded, and no drug use or immunodeficiency was reported.

Laboratory tests: The patient's elevated erythrocyte

KEY WORDS

dissecting cellulitis, folliculitis decalvans, tufted hair, isotretinoin

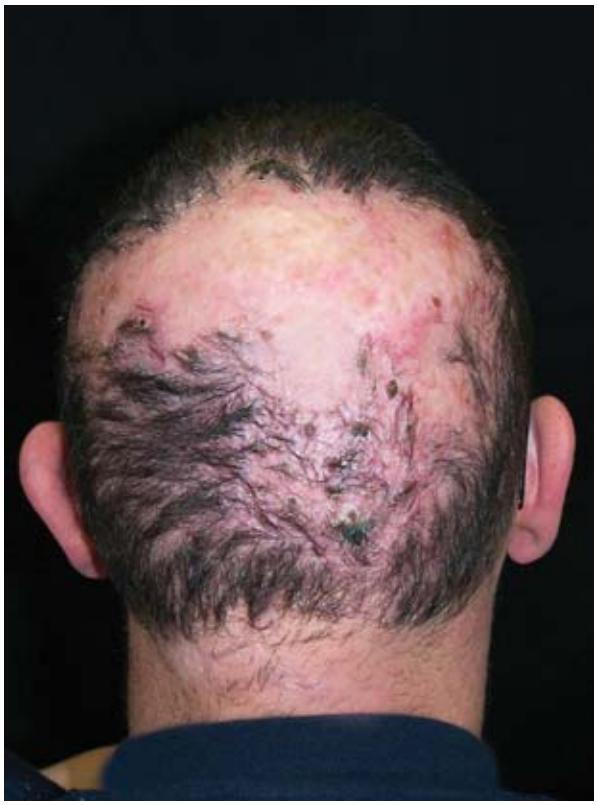

Figure 1. Folliculitis decalvans of the scalp before treatment.

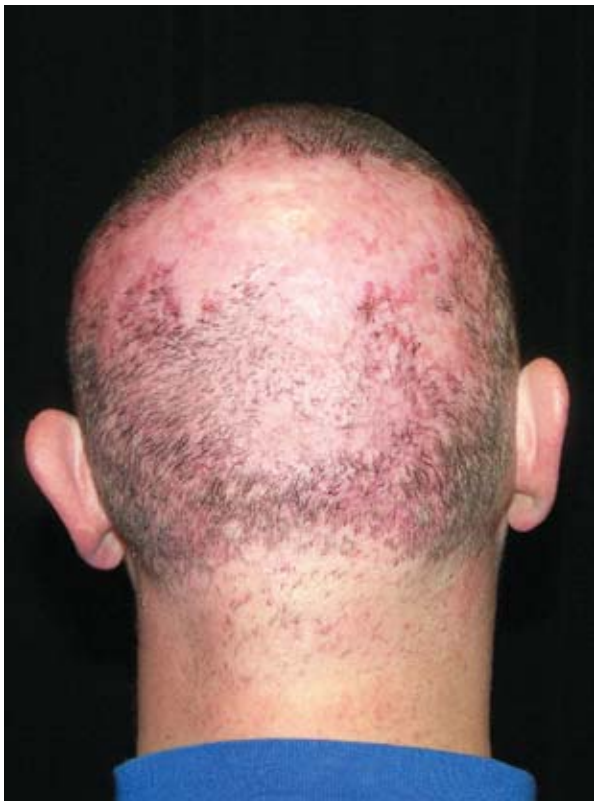

Figure 2. The same patient during triple combination therapy with isotretinoin, clindamycin, and prednisolone with marked improvement after 3 weeks.

sedimentation rate was 26 mm/hr and his C3-complement was 1.79 g/l (normal range 0.55–1.2 g/l).

Histopathology: Histopathologic examination of HE-stained sections showed chronic purulent folliculitis and perifolliculitis with small foci of abscess formation; fractured hair shafts were noted. Neutrophils were predominant and admixed with plasma cells and mast cells. Stains for fungi were negative.

Microbiology: *Staphylococcus aureus* was found in a scalp biopsy.

Treatment and course: The patient was initially treated with isotretinoin 40 mg daily, which was reduced to a maintenance dose of 30 mg daily. Oral clindamycin 300 mg/d was introduced and administered for 6 weeks. The patient also received prednisolone 20 mg daily, which was tapered within 3 weeks. As a result the inflammation was remarkably reduced and the formation of new hair shafts in non-scarred scalp areas could be observed (Figure 2).

During the 6 month follow-up no increase in cholesterol or triglyceride levels was observed. No relapse was observed during this time.

Discussion

Folliculitis decalvans is an uncommon painful and purulent primary scarring cicatricial alopecia. The etiology of the disease is unclear. The primary sterile inflammation is complicated and perpetuated by staphylococcal infection. The toxins of *Staphylococcus aureus* possibly bind to MHC-proteins of antigen-presenting cells and form a complex with the receptors of T-lymphocytes for maintaining local inflammation (6).

The formation of tufted hair follicles may occur during the course of the disease (8) and is an irreversible response of the scalp to the chronic relapsing inflammation (9).

Treatment of folliculitis decalvans is often disappointing. Topical therapy alone is usually insufficient. A combination of anti-inflammatory therapy and antibiotics is the treatment of choice. Dapsone has a mild anti-neutrophilic activity useful in limited disease. Because isotretinoin can be effective in dissecting folliculitis of the scalp (7, 10) we successfully introduced this treatment in this severe case of folliculitis decalvans.

Clindamycin and rifampicin have been reported successful because of their excellent antistaphylococcal activity (6, 11). Rifampicin, however, has the disadvantage of rapidly provoking resistance (6). Surgical and laser treatments may be attempted when medical therapy fails (12, 13).

Conclusion

In this case, we observed an excellent response of folliculitis decalvans to a combined approach using isotretinoin, clindamycin, and prednisolone to induce a rapid remission with partial regrowth of hair.

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