

### Case 10

A 27 year-old man, from Nakhon Si Thammarat.

**Chief complaint:** Itchy scalp for 12 years



### Present illness:

Twelve years earlier, he developed a few painful red papules and pustules with itchy scalp. He was treated with topical steroids and medicated shampoo, prescribed from a clinic, but the symptoms became worse. There was no fever in this patient

### Past history

No known underlying disease

### Physical examination

GA: not pale

Lymph nodes: not palpable

Lungs: unremarkable

Heart: unremarkable

### Skin examination

Well-defined erythematous, painful, rubbery plaques.

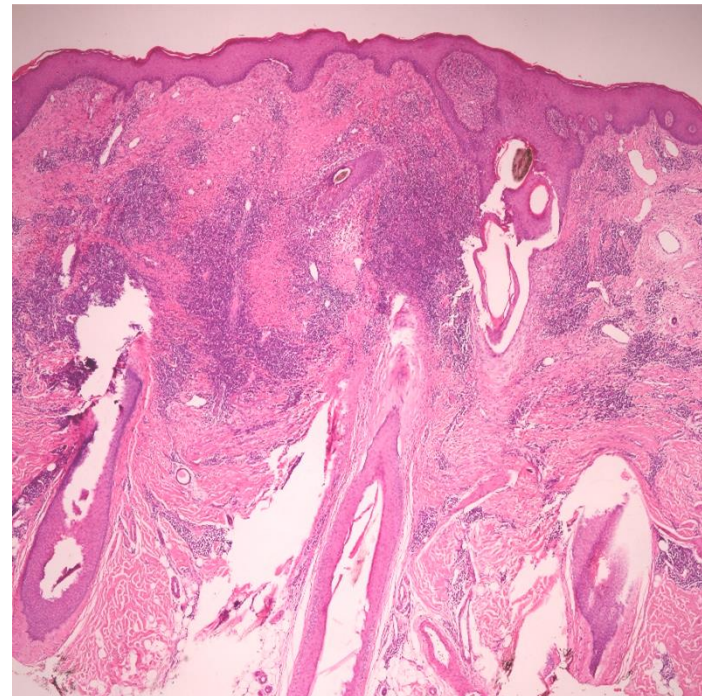
Multiple papules and pustules with yellowish discharge with absence of hair and follicular openings on vertex and occipital area.

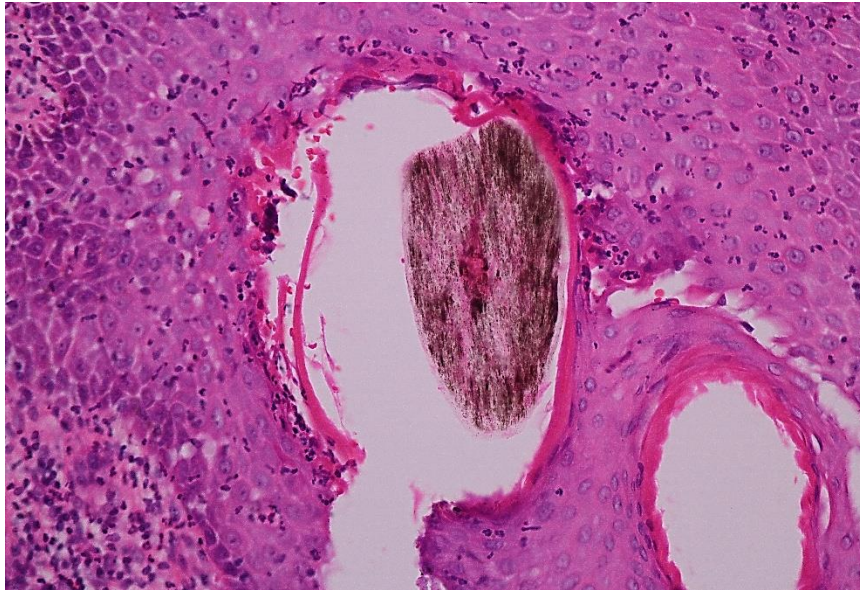
Multiple tufted hair was seen.

### Investigations

- CBC: Hct 52%, Hb 17 g/dL, WBC 9,720/mm<sup>3</sup> (PMN 80%, L 13%, M 6%, E 1%), Plt 224,000/mm<sup>3</sup>
- BUN 12 mg/dL, Cr 0.86 mg/dL

### Histopathology (S15-12429A, scalp)





- Dense inflammatory cell infiltrate of neutrophils within disrupted hair follicles
- Scarring and chronic inflammatory cell infiltrate of lymphocytes and plasma cells surrounding dermal tissue

**Diagnosis:** Folliculitis decalvans

- Treatment:**
- Doxycycline (100 mg) 1 capsule oral twice daily
  - 4% chlorhexidine gluconate cleanser for scalp washing twice daily

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**Discussion:**

Folliculitis decalvans is a rare neutrophilic inflammation of scalp resulting in primary cicatricial alopecia .<sup>1</sup> It was first described by Quinquad in 19<sup>th</sup> century, and in 1905 Brocq *et al* named it as folliculitis decalvans.<sup>2</sup>

Folliculitis decalvans accounts for approximately 11% of all primary cicatricial alopecia. It is common in young to middle-aged groups with slightly predominance in African-American and male gender.<sup>3</sup>

Clinical presentations of folliculitis decalvans include painful follicular pustules and follicular papules on scalp and back, erythematous alopecia plaques with centrifugal progression, and areas of scars.<sup>2, 4</sup> Tufted folliculitis (multiple hairs [5-15] arising from 1 single follicular orifice), follicular keratosis, erosions, hemorrhagic crusts, burning sensation, or itching can be observed.<sup>5</sup>

The etiology remains unknown, but the most widely accepted hypothesis is superantigen theory, described as an abnormal immune response against *S. aureus*.<sup>2, 6 7</sup>

Histopathological findings of folliculitis decalvans showed intrafollicular and perifollicular neutrophilic inflammatory infiltrate, the infiltrate cells also affect the entire follicle. In the advanced stage, plasma cells infiltrate can be observed. The final stages are characterized by fibrous tracts which replace the hair follicles. Foreign-body granulomas also can be observed around the hair shafts in direct contact with dermis.<sup>8</sup>

Dermoscopic findings include tufted hairs, perifollicular pustules. The interfollicular scalp shows twisted red loops. In advanced stage, peripilar white dots corresponding to fibrous

tracts can be seen, associated with a honeycomb pigment pattern.<sup>9</sup>

Therapeutic management include oral antibiotics to eradicate *S. aureus* such as doxycycline, erythromycin, minocycline, co-trimoxazole, cloxacillin, erythromycin, vancomycin, sulfamethoxazole–trimethoprim, fusidic acid, rifampicin, and clindamycin which revealed some effectiveness<sup>10</sup>. Topical antibiotics, such as 2% mupirocin, 1% clindamycin, 1.5% fusidic acid, or 2% erythromycin and antiseptic cleansers should used in combination with oral antibiotics.<sup>11</sup>

Systemic, topical, or intralesional corticosteroids could help reduce inflammation.<sup>2</sup> Isotretinoin, dapsone have been reported with good results, but also had adverse effects.<sup>12</sup>

Other choices of nonsurgical treatment include oral zinc sulfate, tacrolimus ointment, CO<sub>2</sub> laser epilation with Nd:YAG laser, and photodynamic therapy.<sup>13, 14</sup>

Surgery, scalp reduction and hair transplantation, should be considered in cases with no sign of disease activity for several years without any treatment, because folliculitis decalvans can relapse after surgery.<sup>2</sup>

Our case is a 52 year-old man who presented with chronic erythematous painful papules with scalp itching. The physical examination and histologic findings were compatible with folliculitis decalvans. He was treated with doxycycline and chlorhexidine gluconate cleanser.

## References

1. Sillani C, Bin Z, Ying Z, Zeming C, Jian Y , Xingqi Z. Effective Treatment of Folliculitis Decalvans Using Selected Antimicrobial Agents. *Int J Trichology* 2010;2:20-3.
2. Otberg N, Kang H, Alzolibani AA , Shapiro J. Folliculitis decalvans. *Dermatol Ther* 2008;21:238-44.
3. Ross EK, Vincenzi C , Tosti A. Videodermoscopy in the evaluation of hair and scalp disorders. *J Am Acad Dermatol* 2006;55:799-806.
4. Powell JJ, Dawber RP , Gatter K. Folliculitis decalvans including tufted folliculitis: clinical, histological and therapeutic findings. *Br J Dermatol* 1999;140:328-33.
5. Rudnicka L, Olszewska M, Rakowska A , Slowinska M. Trichoscopy update 2011. *J Dermatol Case Rep* 2011;5:82-8.
6. Chandrawansa PH , Giam YC. Folliculitis decalvans--a retrospective study in a tertiary referred centre, over five years. *Singapore Med J* 2003;44:84-7.
7. Bastida J, Valeron-Almazan P, Santana-Molina N, Medina-Gil C , Carretero-Hernandez G. Treatment of folliculitis decalvans with tacrolimus ointment. *Int J Dermatol* 2012;51:216-20.
8. Bernardez C, Molina-Ruiz AM , Requena L. Histologic features of alopecias: part II: scarring alopecias. *Actas Dermosifiliogr* 2015;106:260-70.
9. Tosti A , Torres F. Dermoscopy in the diagnosis of hair and scalp disorders. *Actas Dermosifiliogr* 2009;1:114-9.
10. Mashhood AA, Shaikh ZI, Qureshi SM , Malik SM. Efficacy of rifampicin in eradication of carrier state of *Staphylococcus aureus* in anterior nares with recurrent furunculosis. *J Coll Physicians Surg Pak* 2006;16:396-9.
11. Douwes KE, Landthaler M , Szeimies RM. Simultaneous occurrence of folliculitis decalvans capillitii in identical twins. *Br J Dermatol* 2000;143:195-7.
12. Sellheyer K , Bergfeld WF. Histopathologic evaluation of alopecias. *Am J Dermatopathol* 2006;28:236-59.
13. Parlette EC, Kroeger N , Ross EV. Nd:YAG laser treatment of recalcitrant folliculitis decalvans. *Dermatol Surg* 2004;30:1152-4.
14. Miguel-Gomez L, Vano-Galvan S, Perez-Garcia B, Carrillo-Gijon R , Jaen-Olasolo P. Treatment of folliculitis decalvans with photodynamic therapy: Results in 10 patients. *J Am Acad Dermatol* 2015;72:1085-7.