A Case of Dissecting Cellulitis and a Review of the Literature

Noah S. Scheinfeld, MD


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Dissecting cellulitis (also called perifolliculitis capitis abscedens et suffodiens) manifests with perifollicular pustules, nodules, abscesses and sinuses that evolve into scarring alopecia. It predominantly occurs in African American men between 20-40 years of age, but can occasionally affect other races and women too. Associated musculoskeletal findings are sometimes reported. When it occurs with acne conglobata, hidradenitis suppurativa, and pilonidal cysts, the syndrome is referred to as the follicular occlusion triad or tetrad. Its course is chronic and relapsing, and treatment is often difficult. Medical therapies include isotretinoin, antibiotics, and prednisone. Destructive therapies include X-ray therapy, surgical excision, and skin grafting. Laser epilation of hair follicles is a promising new therapy for dissecting cellulitis.

Case Report

A 20 year-old black male presented with tender nodules and alopecia in his scalp (Figures 1 and 2). He had suffered from this scalp condition for more than one year and the disease was progressing. His lesions had been incised and drained but had returned. Cultures of the lesions did not grow out organisms. He had used isotretinoin, dapsone, intralesional kenalog, and doxycycline without effect. He had a history of mild facial acne and suffered from no systemic medical diseases. He had no occupational exposure to chemicals and no family history of a similar condition. His blood chemistries were all within normal.

Figure 1.
Discussion

Dissecting cellulitis or perifolliculitis capitis abscedens et suffodiens predominantly occurs in African American men 20-40 years of age.\[^1\] It can rarely occur in males of other races\[^2\] and in women or girls.\[^3\] Familial cases have been reported.\[^4\] This condition has been reported in the Australian,\[^5\] French,\[^6\] British,\[^7\] Italian,\[^8\] and American literature.\[^9\] Dissecting cellulitis usually starts on the scalp vertex or occiput as a folliculitis. It expands into patches of perifollicular pustules, nodules, abscesses and sinuses. Nodules may be firm or fluctuant and pus and serous fluid can be expressed. The course is typically chronic and relapsing.\[^10\] Different lesions can be present simultaneously and healing occurs with scarring alopecia which may be patchy or confluent.\[^11\] Often, keloidal scars form in areas of inflammation.

Dissecting cellulitis can occur with acne conglobata, hidradenitis suppurativa, and pilonidal cysts, a syndrome referred to as the follicular occlusion triad or tetrad.\[^12\] It has been reported to occur with pyoderma vegetans,\[^13\] marginal keratitis,\[^14\] and pityriasis rubra pilaris.\[^15\] The pathophysiology is believed to involve follicular blockage in all these conditions. As material accumulates in the follicle, the follicle dilates and then ruptures. Keratin and bacteria from the ruptured follicles can initiate a neutrophilic and granulomatous response.\[^16\] It likely represents a primary inflammatory process with secondary bacterial infection (usually with Staphylococcus aureus or Staphylococcus epidermidis).

Systemic associations have been described. Musculoskeletal problems\[^17\] and arthropathy\[^18\] have been reported with dissecting cellulitis and the follicular occlusion tetrad. A serious association is sternocostoclavicular hyperostosis.\[^19\] Under lesions of dissecting cellulitis osteomyelitis of the skull has developed.\[^20\] Squamous cell carcinoma can arise in chronic, relapsing lesions.\[^21\] Squamous cell carcinoma is also associated with the follicular occlusion triad.\[^22\]
Dissecting cellulitis must be distinguished from several other scalp conditions. The tendency of dissecting cellulitis to cause severe alopecia, fluctuant nodules, and sinus tracts helps to distinguish it from acne keloidalis nuchae. It differs from Pseudopelade of Brocq by its lack of atrophy and "foot prints in the snow" alopecia morphology. Unlike tinea capitis, culture of dissecting cellulitis does not produce a positive fungal culture and nuchal palpation does not reveal palpable lymph nodes, though reports have noted an inflammatory tinea capitis (kerion) that mimicked dissecting cellulitis in adolescents. Folliculitis decalvans starts with areas of perifollicular erythema. Its follicular papules and pustules spread peripherally, leaving central scarred patches of alopecia without nodules or sinuses. Tufted folliculitis resolves with patches of scarring alopecia within which multiple hair tufts emerge from dilated follicular orifices. Folliculotrophic mycosis fungoides with large-cell transformation has presented as clinically similar to dissecting cellulitis of the scalp. Therapies can be divided into destructive, surgical and medical. Destructive therapy of dissecting cellulitis has achieved some therapeutic success. In the 1960s, standard treatment consisted of x-ray therapy, which is effective but is no longer performed due to its chief side effect—skin cancer. C02 laser ablation has been used. Recently epilation of hair follicles with the 800nm laser and long-pulse non-Q-switched ruby laser have been reported with good effect. Surgery is also a possible therapy. Incision and drainage of lesions is a common first step in treating these lesions. Surgical excision of lesions should be considered in severe or recalcitrant cases. Wide excision of the affected areas and split thickness skin grafting has advocates. Combined treatment using tissue expansion, radical excision, and isotretinoin has been used successfully. Medical therapies include antibiotics, antibiotic soaps (chlorohexidine, benzoyl peroxide), dapsone, intralesional kenalog 10-40mg/cc, zinc supplements, tetracycline-type antibiotics and prednisone 40-60mg/day. The follicular occlusion triad in a young woman has been successfully treated with high dose oral antiandrogens and minocycline. Various combination therapies have been used. Isotretinoin 1mg/kg/day is reported as an effective treatment for this condition. Medical therapy did not work in this patient.

Dissecting cellulitis remains a difficult condition to treat. Recognition of this condition allows for the early institution of therapy, which is the best chance for effective intervention. New laser therapies seem particularly promising for this recalcitrant condition.

References


