Naftifine Treatment of Trichomycosis Pubis

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Abstract: Naftifine hydrochloride 1% cream is a recently developed material of proven efficacy in superficial cutaneous fungal infections. The drug has also been reported to have significant antibacterial properties as well. A case of trichomycosis pubis, a bacterial disorder that can easily be mistaken for several fungal diseases, responded to application of naftifine cream. The authors suggest that this medication may be the drug of choice when the clinical presentation consists of nodules encircling pubic or axillary hair.

Trichomycosis pubis is an infrequently reported variant of trichomycosis axillaris. It has been demonstrated that these concretions are composed of colonies of bacteria, most likely of several species of *Corynebacterium*.[1–3] The presence of hair nodules may also indicate fungal disorders (eg, white piedra or black piedra),[4] and, therefore, it would be advantageous to have an agent to treat both bacterial and fungal infections, without necessitating the delay and cost of a definitive culture. As topical treatment has been successfully applied and considered sufficient in both conditions,[4–6] we elected to treat a patient with trichomycosis pubis with naftifine hydrochloride 1% cream.

Naftifine, the first antifungal allylamine introduced in the United States, has a wide spectrum of both *in vivo* and *in vitro* fungicidal activity.[7,8] Its efficacy in selected superficial bacterial infections also has been documented.[9]

The use of naftifine hydrochloride 1% cream in this case resulted in a clinical cure and no recurrence of the infection.

Case Report

- A 21-year-old, fair-complected and red-haired man presented with a chief complaint of a "groin rash." Further questioning revealed that, in reality, the patient was concerned about multiple, asymptomatic, dark-colored, brittle concretions located solely on many pubic hairs. These had gradually increased in size and number over the 4 preceding months. The patient had been engaged in a monogamous relationship for 1 year, and his sexual partner had not had a similar problem. Review of systems, including a detailed genitourinary history, was entirely negative. The patient had not taken any medications, including antibiotics, for at least 5 months before presentation.

Light microscopic examination of an affected hair revealed an adherent material that did not appear to destroy the hair shaft. Gram staining showed thin, threadlike, purple-staining bacteria within a relatively thick unstained zone immediately adjacent to the hair cuticle (Fig. 1). The concretions were cultured as follows: surface contamination was removed by passing through a solution of 70% alcohol, followed by rinse in sterile distilled water. The granule was softened by soaking the hair overnight in sterile distilled saline (pH 7.2) containing Triton X-100, and the encrustation removed by scraping with a sterile scalpel blade. The resulting suspension was used to streak-inoculate a plate of Casman sheep blood agar. Plates were incubated at 35–37C for 4 days. Culture revealed short, gram-positive, non–spore-forming rods, typical of a diphtheroid. Colony types 1 and 2, as described previously,[2] were observed.

The patient was then treated with twice daily applications of 1% naftifine hydrochloride cream. After 2 weeks of therapy, the nodules totally resolved. A telephone follow-up revealed that there had been no recurrence 6 months after cessation of therapy.

Comment

Trichomycosis axillaris and pubis are characterized by the appearance of asymptomatic nodules encapsulating affected hair shafts. Nodules may be yellow (most common), red, black, and fuscous. The sweat in the affected areas may be correspondingly colored. The infection does not involve the surrounding skin.[5]

Although trichomycosis can be found worldwide, there are very few cases reported in the literature in the last 35 years: 15 articles on axillary disease and one

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Figure 1. Nodules found on affected hairs are composed of filamentous bacteria (hair shaft: single arrow; nodule: double arrow).

article noting two cases of pubic disease.[10] Based on the paucity of reports, trichomycosis pubis appears to be much less common than trichomycosis axillaris. Both pubic and axillary disease appear to be caused by the same agent, and have responded to similar treatments.

Although relatively easy to treat, the condition often recurs. It has been reported to respond to benzoic and salicylic acid ointments, antibacterial soaps, and topical antibiotics such as clindamycin. Use of a 2–3% sulfur ointment, as well as shaving the hair have also been suggested as modes of therapies.[5,6]

The presence of hair concretions may also be associated with other conditions, fungal disorders (white and black Piedra),[4] and artifactual coating of hair from powders or deodorants. It would be of great advantage to have a single agent to treat all of the infectious etiologies of hair nodules. Naftifine hydrochloride 1% cream, an antifungal material, proved to be perfectly satisfactory treatment for this bacterial disease.

Naftifine interferes with ergosterol biosynthesis at a different stage than the imidazole antifungals. Naftifine inhibits squalene epoxidase, causing intracellular accumulation, and consequent decreased utilization, of squalene. This results in decreased synthesis of ergosterol, an essential component of fungal cell membranes.[11,12] Aside from antifungal action, the drug has both an anti-inflammatory[13] and antibacterial[9] activity.

As naftifine already has the advantage of a single compound that combines antifungal and anti-inflammatory effects, as well as antibacterial action, we chose to treat this case of trichomycosis pubis with twice-a-day topical application of naftifine 1% cream. The resolution of symptoms was rapid, no side effects were noted, and there has been no recurrence to date. This suggests that naftifine could serve as the drug of choice for all infectious conditions that present as nodules encapsulating the hair shaft, regardless of the exact etiology.

Drug Name

naftifine hydrochloride 1% cream: Naftin

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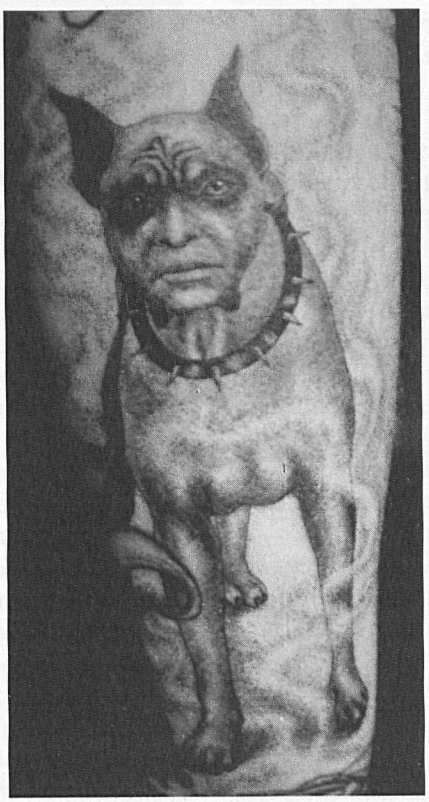

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