Anterolateral Leg Alopecia Revisited

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Alopecia of the leg—an extremely common yet ill-defined condition—is described in few contemporary dermatology textbooks. In this article, we describe 3 patients with anterolateral alopecia of the legs and further characterize this condition through a review of the literature.

Case Reports

Patient 1—A 42-year-old white man presented for evaluation of hair loss on the leg. This hair loss had occurred 20 years earlier and had not progressed. The patient's medical history was unremarkable, and he was not using any medications. Family history was not significant. Alopecia of the distal lower anterolateral area of both legs was well circumscribed (Figure). The scalp had not lost hair. Pedal pulses were normal.

Patient 2—A 38-year-old white man in good health reported a 30-year history of loss of hair from the legs with no associated symptoms. Personal and family histories did not include androgenic alopecia or alopecia areata. Alopecia was nearly complete on the anterolateral area of both legs and had occurred in smaller patches on the anterior area of the thighs. A few isolated hairs were present. The scalp had not lost hair. Pedal pulses were normal. A punch-biopsy specimen from the involved skin lacked hair follicles.

Patient 3—A 49-year-old man reported that he had lacked hair on the midlegs for more than 20 years. There was no other significant history. Alopecia of the anterolateral area of both legs was well circumscribed and nearly complete. Scattered among the patches were a few areas of normal hair growth. The scalp had not lost hair. Pedal pulses were normal. A punch-biopsy specimen from the involved skin lacked hair follicles.

Comment

Anterolateral leg alopecia, a common form of hair loss, usually occurs in middle-aged and elderly men but also occurs in women.[1] This peculiar form of alopecia is described in few contemporary dermatology textbooks; where it is described, details are scarce.

Anterolateral alopecia presents as bilaterally symmetrical, sharply demarcated, circumscribed, smooth patches of alopecia confined to the anterior and lateral aspects of the leg.[2] Occasionally, a few hairs grow within the patches. Broken hairs are not common.[2] Alopecia sometimes occurs similarly on the thighs.[3]

According to some estimates, the prevalence of anterolateral alopecia among males is 35%.[2] This condition is so common that some believe it represents a variant of normal distribution of body hair. Anterolateral alopecia is more common after 30 years of age,[3] is often referred to as *peroneal alopecia*, and has been recognized for decades but has been largely ignored. The word *peroneal* is used because this alopecia tends to be distributed along the peroneal nerve (this association is not substantiated by any clinicopathologic correlation).

The etiology of anterolateral leg alopecia has remained largely a mystery. Only in the 1920s did clinicians begin to write about this form of hair loss. Kidd[4] described anterolateral leg alopecia as resulting from "use inheritance" (patients with this condition wore tight-fitting ancestral generation shoes). Some have theorized that leg crossing contributes to the condition,[2] whereas others have pointed to friction and trouser rubbing.[5,6] Recently, Adams[7] attributed a young male patient's case of "water-slide alopecia" of the lower extremities to friction occurring during recreational water-slide activity. Other investigators, however, have refuted proposed connections with trauma and friction and have argued that friction alopecia tends to produce truncated hairs and follicular hyperkeratosis.[3]

In 1940, Tommasi[3] suggested a possible relation between this pattern of alopecia and an endogenous "neuroarthritic diathesis" and hyperuricemia, but evidence of such a connection was limited.

Robertson[8] believed that anterolateral leg alopecia is related to androgenetic alopecia and preferred the term *patterned alopecia*. He suggested a disturbance in "male sexual secretion" as the etiology for the leg

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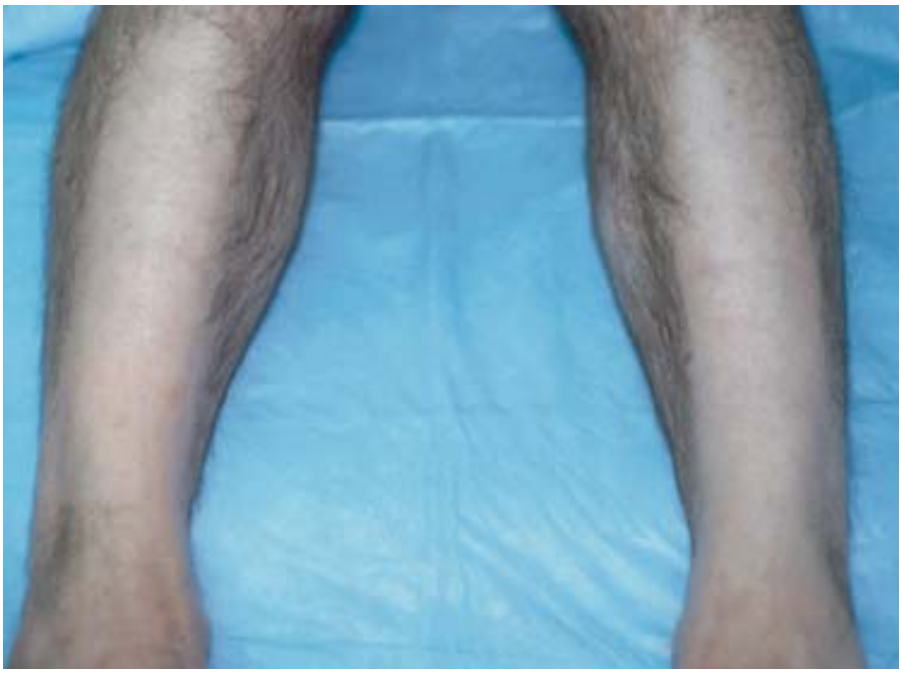

A 42-year-old man with nearly complete alopecia of the anterolateral area of both legs.

alopecia. Although both forms of alopecia can often present together, Hamilton[9] showed no statistically significant association between male pattern baldness and alopecia of the lower extremities.

Popkin[5] suggested acute ischemia as a contributing factor in hair loss involving the lower extremities. Kligman[10] remarked that, aside from loss of fine hairs on the dorsum of the toes late in severe atherosclerosis obliterans, growth of leg hair is not correlated with any kind of atherosclerotic disease.

In short, various hypotheses have been put forward to explain anterolateral leg alopecia, but none has been substantiated, and no causal factor has been identified.

Most male patients say that they never noticed the onset of loss of leg hair or never paid serious attention to it. The course of this condition is benign, progression is rare, and spontaneous resolution occasionally occurs.

The histopathologic features of this condition are not described in the literature. This lack of information may reflect how unimportant most people consider the condition and clinicians' unwillingness to perform biopsies. Our 2 biopsy specimens lacked hair follicles but were otherwise unremarkable.

Clinically, the main differential diagnosis is alopecia areata. Alopecia areata tends to involve other areas and has characteristic histologic findings.

A treatment outline for this common disorder also is not described in the literature. Patient education and reassurance are usually satisfactory.

Anterolateral leg alopecia is mentioned in few textbooks, and documentation in the literature is limited. Only through further clinical investigation will the cause, pathogenesis, course, and treatment of this curiosity be better understood.

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