Higher Incidence of Rolled Hairs in Renal Transplant Recipients: a Possible Complication of Corticosteroid and Cyclosporine Therapy

Sir,

Abnormal keratinization of the distal part of the hair follicle can prevent emergence of the growing hair from the follicle and lead to spiral growth within a hyperkeratotic papule, so-called "rolled hairs" (1). Rolled hairs have been reported in patients with keratosis pilaris (1), neurodermatitis (1), palmoplantar keratoderma (2), and hypertrichosis (3). The disorder has also been associated with corticosteroid therapy (1). Here we describe rolled hairs in renal transplant recipients and discuss the possible roles of prednisolone and cyclosporine in the pathogenesis of this condition.

CASE REPORTS

A total of 45 serial, unselected renal transplant recipients, and 45 age- and sex-matched healthy controls were carefully examined for the presence of rolled hairs. Seven patients (15.5%), 3 women and 4 men, were identified as having this disorder. Patient age ranged from 15 to 45 years (mean 31.5 years), and the posttransplantation period was between 2 and 180 months (mean 38.7 months). Prednisolone and cyclosporine had been given during this period. Rolled hairs were found on the extensor aspect of the extremities, the abdomen, and the buttocks. All 7 were observed to have hypertrichosis and keratosis pilaris concomitant with rolled hairs. None of the subjects in the control group had this disorder.

DISCUSSION

Rolled hairs is a disorder of hair growth in which hairs are irregularly coiled within a hyperkeratotic papule (1). Scanning electron microscopy of these hairs shows that they are coiled, spiralling around their own axis, and have normal cuticles (2). The condition was first described by Fergusson & Derblay in patients with keratosis pilaris (1). Two of their patients were receiving corticosteroid therapy at the time of that study.

It is well known that both corticosteroids and cyclosporine modify the pilosebaceous unit and cause hypertrichosis and keratosis pilaris (4, 5). Such side effects are frequently seen in renal transplant recipients receiving these drugs (6, 7). It is difficult, however, to differentiate between the effects of corticosteroids and those of cyclosporine. The combined action of these drugs may lead to the appearance of rolled hairs in addition to hyperkeratosis and keratosis pilaris in renal transplant recipients. Since cyclosporine reduces the clearance of corticosteroids, and therefore potentiates its effects (8), this could be another mechanism in the development of rolled hairs.

Our observation supports earlier findings which have suggested that rolled hairs is a complication of corticosteroid therapy. To our knowledge, the role of cyclosporine in the development of this disorder has not been proposed previously. However, the fact that rolled hairs were not seen in every renal transplant recipient we studied, all of whom were taking prednisolone and cyclosporine, suggests that these drugs are not the sole agents involved in the pathogenesis of this condition.

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