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Facial Eruptive Vellus Hair Cysts Occurred after 3% Minoxidil Application

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Dear Editor:

Minoxidil is an antihypertensive agent. Recently, it has been used to treat male pattern hair loss and alopecia areata multiplex¹. It is generally well tolerated, but common adverse events include irritation, pruritus, dryness, scaling and unwanted hair growth². In addition, exacerbation of hair loss, weight gain, facial swelling, and chest pain have been reported. We report a case with facial eruptive vellus hair cysts caused by the application of 3% minoxidil solution on the scalp for the treatment of hair loss.

A 34-year-old woman presented with numerous pinhead- to matchhead-sized papules and vellus hair growth on the entire face, especially on the forehead (Fig. 1). She had applied 3% minoxidil solution on the scalp for 4 years for the treatment of hair loss. She had no family history of eruptive vellus hair cysts. Surgical incision and extraction had been performed to remove the cysts. Eruptive vellus hair cysts remitted after surgical removal and cessation of

3% minoxidil application. On histopathological examina-



Fig. 1. Numerous pinhead- to matchhead-sized papules on forehead.

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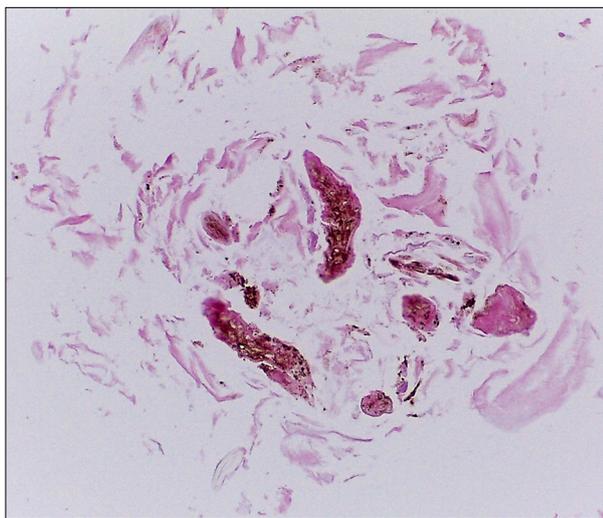


Fig. 2. Laminated keratinous material and vellus hairs on histopathological examination (H&E, ×200).

tion, laminated keratinous material and vellus hairs were shown (Fig. 2).

Eruptive vellus hair cysts show asymptomatic follicular papules most commonly on the chest³. They are caused by a developmental abnormality of vellus hair follicles. The occlusion of infundibulofollicular areas leads to retention of hairs, cystic dilatation, and atrophy of the hair follicles⁴. The mechanism by which minoxidil stimulates hair growth is not fully understood. Nonetheless, it has been used to treat hair loss. Hypertrichosis is one possible adverse effect. Hypertrichosis is restricted to the face and exposed areas, possibly due to inadvertent application. Rarely, systemic hypertrichosis caused by higher sensitivity of the hair follicles to minoxidil has been reported.

There has been no report on the association between minoxidil and an infundibular developmental abnormality or hyperkeratotic epithelium. However, hypertrichosis might be one of the causes of cystic changes in the skin. Epidermal cysts caused by cyclosporine have been reported⁵. Hypertrichosis is a known side effect of cyclosporine. In addition, numerous facial cysts, and the absence of family history or past history of minoxidil application suggested the possibility of minoxidil-induced eruptive vellus hair cysts. We report this unusual case of facial eruptive vellus hair cysts occurred after using minoxidil for long time.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

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