

〈会頭講演〉

毛器官とその機能異常

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Hair Apparatus and Its Dysfunction

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Abstract

The hair apparatus consists of a hair root and a hair shaft. The hair papilla, mesenchymal component, is located at the bottom of the hair apparatus. The hair apparatus has a unique hair cycle which includes anagen, catagen and telogen. Hair growth happens only in the anagen phase. Anagen hair follicle has a basket-like capillary network by scanning electron microscopy. Recently, the mechanism regulating the hair cycle is suggested as follows. In late telogen or early anagen, interactions between hair papilla cells and presumptive stem cells in bulge area cause hair growth. From catagen to telogen, the apoptotic may cause hair involution. Hair dysfunction includes popular diseases, alopecia areata and male pattern baldness. Alopecia areata is suggested to be an autoimmune disease and may be treated by topical immunosuppressant such as FK 506. Male pattern baldness is probably caused by interactions between androgen and the hair papilla. At this time, topical minoxidil, vasodilator, is expected to be an effective therapy for male pattern baldness. Hair dysfunction is very serious not only in cosmetic appearance but also in mental aspect. Therefore, appropriate treatments and the development of new therapies for hair dysfunction will become more and more important in the future.

Key words: hair, hair papilla, hair cycle, alopecia areata, male pattern baldness.