Subject: Studie: Hormone und Antiandrogene in vitro
Posted by ezekiel on Sun, 19 Apr 2009 15:32:20 GMT
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Da der kleine Wink im Thread "Zur Abwechslung mal was neues" unter "Sonstiges" wohl zu wenig Aufmerksamkeit erregt, hier mal die besprochene Studie.
Ich dachte bisher, Testostern selbst sei gut oder wenigstens nicht schlecht für das Haarwachstum. Finasterid und Dutasterid erhöhen ja nicht unerheblich das sog. Scalp-Testosterone.

J Invest Dermatol. 1993 Jul;101(1 Suppl):98S-105S.
"Sex hormones and antiandrogens influence in vitro growth of dermal papilla cells and outer root sheath keratinocytes of human hair follicles." Kiesewetter F, Arai A, Schell H.
Department of Dermatology, University of Erlangen-Nürnberg, Germany.

Anagen hair bulb papillae, interfollicular dermal fibroblasts, and interfollicular keratinocytes isolated from fronto-parietal scalp biopsies as well as outer root sheath keratinocytes from plucked anagen hairs were separately grown in subculture for 14 d. The effect of different concentrations (2.4 nM-17.3 microM) of testosterone, dihydrotestosterone, and the antiandrogens cyproterone acetate or 17 alpha-propylmesterolone on growth behavior of the mesenchymal and epithelial cell types of the hair follicle were comparatively studied by means of growth curves, cell doubling times, and 3H-thymidine incorporation. For control, all cell lines were subcultured in hormone-free medium. Testosterone and dihydrotestosterone (345 nM) significantly reduced proliferation of papilla cells compared with dermal fibroblasts ($p < 0.01$) and outer root sheath keratinocytes compared with interfollicular keratinocytes ($p < 0.01$), as well as compared with cells cultured in control medium. Low concentrations of 17 beta-estradiol were ineffective, whereas doses of 180 nM 17 beta-estradiol increased the growth velocities of all cell types, especially of papilla cells, compared with dermal fibroblasts. Low doses of either cyproterone acetate (24 nM) or 17 alpha-propylmesterolone (29 nM) induced a growth enhancement, especially of papilla cells and outer root sheath keratinocytes, whereas high doses of cyproterone (1.20 microM) and 17 alpha-propylmesterolone (1.45 microM) had opposite effects. These changes were significant between papilla cells and dermal fibroblasts as well as between outer root sheath keratinocytes and interfollicular keratinocytes. Applying increasing doses of androgens to cyproterone acetate (24 nM)- or 17 alpha-propylmesterolone (29 nM)-containing media neutralized the growth-stimulating effect of antiandrogens, particularly in papilla cells and outer root sheath keratinocytes. However, minor differences between testosterone and dihydrotestosterone effects on cell growth were found. The data clearly demonstrate that the changes of in vitro growth of hair follicle cells depend on the concentrations of androgens and antiandrogens, as higher doses of both antiandrogens tested retarded the cell proliferation similar to testosterone or dihydrotestosterone. The papilla cells and outer root sheath keratinocytes reacted more sensitively to the hormones tested, thereby confirming the concept of a distinct androgen sensitivity of these specialized hair follicle cells.