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Nudging hair shedding by antidandruff shampoos. A comparison of 1% ketoconazole, 1% piroctone olamine and 1% zinc pyrithione formulations

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Synopsis

English

Hair shedding and hair thinning have been reported to be affected by dandruff and seborrhoeic dermatitis. The present study was conducted in 150 men presenting with telogen effluvium related to androgenic alopecia associated with dandruff. They were randomly allocated to three groups receiving each one of the three shampoos in the market containing either 1% ketoconazole (KTZ), 1% piroctone olamine (PTO) or 1% zinc pyrithione (ZPT). Shampoos had to be used 2–3 times a week for 6 months. Hair shedding during shampoo was evaluated semiquantitatively. Hair density on the vertex was evaluated on photographs using a Dermaphot. Trichograms were used for determining the anagen hair percentage and the mean proximal hair shaft diameter using computerized image analysis. The sebum excretion rate (SER, μg cm^{-2} h^{-1}) was also measured using a Sebumeter®.

The three treatments cleared pruritus and dandruff rapidly. At end point, hair density was unchanged, although hair shedding was decreased (KTZ: −17.3%, PTO: −16.5%, ZPT: −10.1%) and the anagen hair percentage was increased (KTZ: 4.9%, PTO: 7.9%, ZPT: 6.8%). The effect on the mean hair shaft diameter

was contrasted between the three groups of volunteers (KTZ: 5.4%, PTO: 7.7%, ZPT: −2.2%). In conclusion, telogen effluvium was controlled by KTZ, PTO and ZPT shampoos at 1% concentration. In addition, KTZ and PTO increased the mean hair shaft thickness while discretely decreasing the sebum output at the skin surface.

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