HAIR DISORDERS

THE USE OF AN ANTI-DANDRUFF SHAMPOO RELAYED BY A REBALANCING SHAMPOO: IMPACT ON FUNGAL AND BACTERIAL FLORA OF THE SCALP

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Introduction: Dandruff/seborrheic dermatitis (D/SD) states have been associated with imbalance of fungal and bacterial flora colonizing the scalp.

Objective: We aimed to assess the impact of anti-dandruff shampoo treatment on microbiota communities and the use of a rebalancing shampoo on the period following anti-dandruff treatment.

Materials and Methods: Fourty-seven subjects with D/SD completed this study: 2-weeks (W0 to W2) common anti-dandruff shampoo treatment, followed by 4 weeks (W2 to W6) receiving the rebalancing shampoo or a neutral shampoo. Swab samplings were performed at each time point for bacterial and fungal distribution analysis. M. restricta, M. globosa, S. epidermidis and C. acnes were also quantified by qPCR. Analysis of covariance was used to assess the statistical significance of the results.

Results: The treatment with anti-dandruff shampoo improved dandruff state (OCDS). At W0, S. epidermidis predominated the bacterial flora followed by C. acnes whereas at W2 a switch occurred, with a predominance of C. acnes before S. epidermidis. Anti-dandruff treatment reduced M. restricta and M. globosa proportions and quantities whereas other species proportion increased (reflected by the increase of Shannon-weaver diversity index). In the second step of our study, OCDS levels increased in the control group whereas there were maintained in the rebalancing group. In the control group, the fungal diversity index and M. globosa and M. restricta reached initial levels. Conversely, in the rebalancing group, Malassezia spp proportions remained below their initial values, while the fungal diversity index remained high.

Conclusions: D/DS states improvement following anti-dandruff shampoo treatment was

associated with an increase diversity index of the fungal flora and with a switch of bacterial predominance between S. epidermidis and C. acnes. We showed that rebalancing shampoo application maintained its effect on fungal flora and led to a decrease in the occurrence or relapses of D/SD compared to a neutral shampoo.