

Tavola rotunda: Rasatura elettrica e pelle sensibile

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Introduction

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Objectives

Facial shaving has been central to men's grooming routine for hundreds of years. Currently, the most common shaving methods are wet and dry shaving with razors and electric shavers, respectively. As shaving aims at cutting the hair very close to the skin, mechanical irritation of the skin with partial abrasion of the stratum corneum and perifollicular hyperemia occurs with all shaving methods. These responses are common and are ultimately experienced as temporary burning sensation, dryness and redness. Since cooling of the skin is widely held to counteract cutaneous inflammatory responses, we tested whether the local application of cold during dry shaving can reduce shaving-associated adverse skin reactions.

Materials

and

Method

The shaving head of an electric shaver was modified to include a thermo electric cooling element (TEC). During operation the temperature of this element drops by $\sim 15^{\circ}\text{C}$ as compared to its temperature at baseline. Throughout the shave this cool element remains in contact with the skin.

The shaver can be used with the cooling function switched on or off without impact on shaving performance. 65 male volunteers aged 22-52 years (mean: 35 years), 20 atopics and 45 with self-assessed sensitive skin, used the same shaver twice, with and without cooling, each on half of their facial area for 90 seconds. Subjects were randomized for the order of application and the side of face. Symptoms of skin inflammation including redness, papules, roughness, squamous appearance, microlesions and overall irritation were assessed 10 minutes after each shave by a blinded dermatologist with the help of visual analogue scales (VAS). Evaluation was performed based on the combined scores, and the statistical significance was assessed by Student's t-test for unrelated samples. In addition the subjects scored their perceived symptoms

of inflammation, i.e. irritation, redness, tension, itching, burning, using 4 point Liekert scales.

Results

Skin cooling during dry shaving resulted in significantly less skin responses as compared to dry shaving without cooling in atopic men and men with self-assessed sensitive skin based on the assessments by physicians (atopic: 0.075 ± 0.042 vs. 0.775 ± 0.11 , $p < 0.001$; sensitive skin: 0.114 ± 0.038 vs. 0.671 ± 0.083 , $p < 0.001$). Study subjects also found skin cooling during dry shaving to result in less skin irritation ($p < 0.05$). Redness was the shaving-associated irritation marker to be decreased most markedly by skin cooling during dry shaving.

Conclusions

Taken together, our findings suggest that active cooling of the skin during dry shaving can inhibit shaving-induced skin inflammatory reactions. Our results are relevant for both, atopic men and men with self-assessed sensitive skin.