In the Absence of Fragrance, Both Deodorants and Antiperspirants Show Effective Control of Underarm Malodor

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Introduction

Axillary odor can seriously compromise a persons quality of life. In previous posters, we have shown that the effectiveness of hygiene measures for controlling odor were enhanced following application of either a deodorant or antiperspirant (AP) preparation. This poster presents the anti-odor results of a direct clinical comparison between a perfume free AP product containing aluminum zirconium trichloro hydrex glycine (IZAG) and a perfume free deodorant product containing a glycol base.

Objective

The objective of this study was to directly assess the relative ability of perfume free deodorant and antiperspirant products to control underarm malodor.

Methods

Design of the Malodor Clinical Study
Trial was conducted at Hill Top Research Inc., Miamiville, Ohio. For the trial, 53 men, aged 18 – 58, were entered into the study.

Pretreatment Phase
Subjects completed a 12-day conditioning period in which they did not use deodorant or antiperspirant products. Subjects were allowed to wash their underarms using a mild, unscented soap.

Treatment Phase
At the end of the conditioning period, subjects qualified for the study if 24 hours after a controlled soap wash they had an axillary malodor score $\geq$ 4.0 (0 – 10 scale).

Axilla were randomly assigned to undergo one of the following hygiene procedures:

AP Product
Soap washing plus a daily controlled application of 400 mg of a commercial, perfume free solid stick antiperspirant product containing aluminum zirconium trichlorohydrex glycine (IZAG) in an anhydrous, silicon base.

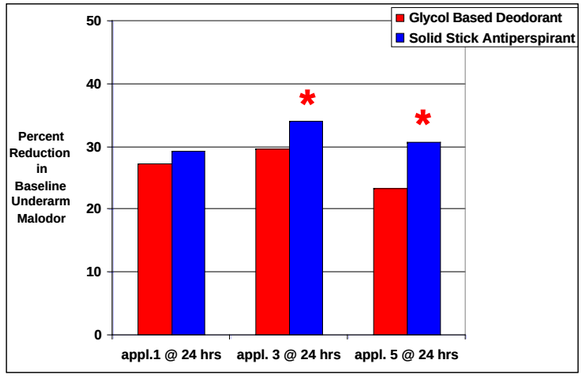
Deodorant Product
Soap washing plus a daily controlled application of 400 mg of a perfume free gel stick commercial deodorant product containing a glycol base.

Malodor Measurements
Malodor intensities were assessed by 4 trained judges using a 0 – 10 scale.

Subjects were assessed for malodor intensity at baseline, and 12 & 24 hours after the 1st, 3rd and 5th days treatment.

Results and Discussion

- **The study was well balanced with baseline malodor scores similar for both test groups.**



* significant ($p < 0.05$) difference using the Nonparametric Wilcoxon signed rank test

- **Both products provided strong reductions in baseline odor throughout the course of the study.**
- **The onset of the odor control benefit was very fast with strong, long lasting odor reductions observed for both products after only one application.**
- **Twelve hours after application, both products provided a similar level of odor protection with no statistical difference between treatments. However, 24 hours after application the AP product was significantly more effective than the deodorant at controlling odor after the 3rd and 5th applications.**
- **The advantage of the AP product in providing enhanced odor control at the later time points was likely the result of a combinatorial effect of reduced underarm wetness and the ability of IZAG to control odor causing bacteria.**

Conclusions

- **Interestingly, even in the absence of perfume, both the antiperspirant and deodorant provided strong and long lasting underarm malodor control.**
- **The extra benefit of day long wetness control likely enabled the antiperspirant product to be more effective than the deodorant product at providing long lasting odor control.**
- **These results indicate that product chassis can contribute significantly to the malodor control of antiperspirant and deodorant products.**

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