INTRODUCTION

More than 90% of consumers in the United States use an antiperspirant product to control wetness and odor in the axilla. The presence of axilla wetness or malodor can have a significant negative impact on self-confidence and social acceptance. As a result, most consumers rank the use of antiperspirant or deodorant products as one of the top two or three priorities in their grooming regime.

Most consumers, more than 90%, in the United States, apply their product as part of their morning hygiene and hygiene regime. However, many consumers report their product during the day to prevent axilla wetness and malodor from appearing in the late afternoon or evening. Late day axilla wetness and malodor can be attributed to an increase in overall sweat rate during the evening.

Sweat rate is known to have a circadian cycle that follows a sinusoidal pattern with a maximum level near 8 pm and a minimum at night. There is limited data in the literature describing the impact of respiration on or in the day application. One study showed that two applications of a commercial cream product per day provided better perceived efficacy to a commercial aluminum chloride-based product in the treatment of hyperhidrosis with a much higher rate of patient compliance. However, there is no data in the literature that quantifies the impact of application time or number of applications on antiperspirant efficacy in the general populace.

OBJECTIVE

Determine the impact of twice daily dosage and time of product application on the efficacy of a commercial cream product via standard hot room product testing.

METHODS

Clinical Protocol

Data Treatment

Data was analyzed by four methods:

1. The treatment effect of each leg was confirmed via comparison of the LS mean of the mg sweat collected for each treated axilla versus the corresponding untreated axilla.

2. The percent reduction for each treatment group was calculated using the following equation:

   \[ \frac{\text{mg sweat collected in untreated axilla} - \text{mg sweat collected in treated axilla}}{\text{mg sweat collected in untreated axilla}} \times 100 \]

   The LS means of the percent reduction were compared by analysis of variance.

3. The data was also analyzed by transactional nonparametric statistical analysis.

4. The percent panels that remained at an imperceptible sweet level (less than 1 mg collected) for each treatment group were determined.

RESULTS

All treatments showed a significant effect versus the untreated axilla.

Analysis of LS means showed that PM and AM+PM applications were significantly more effective than AM application at all three test points.

Nonparametric statistical analysis showed that PM and AM+PM applications were significantly more effective than AM application at all three test points and that AM+PM was significantly more effective than PM application at 10 days.

There is a minimum sweat amount required for consumers to notice perspiration in the axilla. AM+PM application resulted in significantly more responders below the perceptible level than conditions than the other two treatment methods.

CONCLUSIONS

Twice daily application will provide a significant clinical and noticeable benefit versus the typical once per morning treatment.

Evening application will provide a clinical benefit versus morning application.

The current morning application preferred by most consumers can be improved by altering their treatment pattern to either evening application or twice daily application.

REFERENCES


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