INTRODUCTION

Appearance is a major concern for women. Beyond the presence of wrinkles, facial expression is a paramount factor. A skin care product has been developed based upon a combination of a derivative of jasmone acid (JAD) (INCI: sodium tetrahydrojasmonate) and retinol, to potentially reduce wrinkles. The present study aimed at evaluating the effect of this combination upon some epidermal markers (Ki67, Involucrin, Filaggrin) from skin biopsies, according to Voorhees-Griffiths patch test assay IV clinically assessing anti-aging properties of the skin care product, thanks to different atlases that allow some signs of facial skin to be classified and graded.

METHODS

IV/ A double blind randomized controlled study (27 healthy subjects, aged 41-60y, presenting photo-aged skin on their forearms [6-8 score on McKenzie scale]) was carried out by topically applying the 2% JAD : 0.1% retinol combination versus its vehicle according to Voorhees-Griffiths patch test assay. After 12 days of application under occlusion, 3 mm punch biopsies were taken prior to immunohistological analysis of epidermal markers.

II/ Three clinical studies were conducted to evaluate the anti-aging efficacy of the skin care product on women volunteers (50% were sensitive skin, as self-declared). Women applied the skin care product (emulsified gel specially developed to stabilize Retinol and JAD) followed by sunscreens to the whole face once daily for 8 weeks.

Study 1: Clinical assessment of wrinkles (using dynamic atlas developed by L'Oreal), skin texture and complexion evenness (using Dermascore®) was performed on 51 female volunteers, aged 45-65y. A questionnaire was included for product self-assessment.

Study 2: The cutaneous relief of crow’s feet was quantified through analysis of surface replicas, using QuantinardTM software on 32 female volunteers, aged 46-65y.

Study 3: Clinical evaluation of vertical wrinkles was carried out using standardized scorings through published clinical atlas, on 49 female volunteers, aged 52-65y and self-assessment of perceived efficacy (self-appearance, tired, strict, sad-looking...).

DISCUSSION AND CONCLUSION

For the first time, the JAD:Retinol combination (versus retinol alone or JAD alone or vehicle) was found to significantly stimulate the expression of Ki67 and 2 terminal epidermal differentiation markers (Filaggrin and Involucrin) involved in epidermal regeneration process. This epidermal effect of JAD:retinol is very important. It complements the already known properties of retinol (1) and those of JAD (2). Moreover, the results provide evidence that the new skincare product is endowed with anti-aging properties and clearly impacts facial appearance. Vertical wrinkles showed a significant decrease in severity. Interestingly, volunteers noticed a positive effect brought by the product, i.e. a clear reduction of sad, tired and strict looking appearances. Future works are needed to link vertical wrinkles with facial expressions.

REFERENCES