Efficacy of anti-aging products for periorbital wrinkles as measured by 3-D imaging

Kaczvinsky JR¹, Griffiths CE, Schnicker MS, Li J.

Author information

¹The Procter & Gamble Company, Cincinnati, Ohio 45241, USA. kaczvinsky.jr@pg.com

Abstract

BACKGROUND:

The periorbital area is a key wrinkle-prone region, where the first signs of aging usually appear.

AIMS:

To demonstrate the ability of new anti-aging moisturizing products to improve overall smoothness and wrinkle depth appearance in the periorbital region via the Fast Optical in vivo Topometry of Human Skin (FOITS).

METHODS:

Two double-blind, randomized, controlled, split-face studies (n = 42, Study 1; n = 35, Study 2) were conducted in women 30-70 years old with moderate to distinct periorbital wrinkles. Subjects applied 0.5 g of individual products to half their face twice daily for 4 weeks. Four test products containing niacinamide, the peptides Pal-KT and Pal-KTTKS, and carnosine were used and included a daytime SPF 30 lotion also containing antioxidants, a night cream, an eye cream also containing caffeine, and a wrinkle treatment containing retinyl propionate. The wrinkle treatment was only tested in Study 2. The FOITS technique was used to measure changes in periorbital R(a) (mean roughness) and R(z) (average maximum roughness) at 2 and 4 weeks.

RESULTS:

In Study 1, the daytime SPF 30 lotion, night cream, and eye cream significantly improved crow's feet smoothness after 4 weeks relative to no treatment. After 4 weeks, the daytime SPF 30 lotion and night cream, but not the eye cream, were significantly better than no treatment at improving R(z). In Study 2, the night cream, eye cream, and wrinkle treatment, but not the daytime SPF 30 lotion, significantly improved both R(a) and R(z) after 4 weeks. To increase power and precision of estimates, a meta-analysis was performed; the pooled data showed all three products were significantly better than no treatment at improving R(a) and R(z) after 4 weeks.

CONCLUSIONS:

Four weeks of treatment with these products was shown to improve the smoothness of periorbital skin and to reduce the apparent depth of larger wrinkles.