ABSTRACT
Evidence of the signs associated with skin aging often first appears in the periorbital area and includes wrinkles, eyelid bags, circles around the eye, or a tired look. This multi-center study aimed to investigate a novel eye cream which contains a proprietary mixture of human growth factors and cytokines in combination with caffeine, bisabolol, glycyrrhetinic acid and sodium hyaluronate for periorbital rejuvenation. The study, which was completed by 37 female subjects between 36 to 65 years of age, revealed that clinical signs of wrinkles, lower eyelid bags or sagging, dark circles, and skin texture significantly improved between 14% to 28% in average after six weeks of twice daily application. These clinical improvements were confirmed by the subjects using a questionnaire. The subjects further reported that their tired look significantly improved by 32% in average. All subjects tolerated the eye cream well and liked the way it felt. The cream’s efficacy, excellent tolerability in the delicate periorbital skin area, and pleasant sensory properties explain why a large majority (78%) would continue regular use. This study corroborated that topical application of growth factors and cytokines are also beneficial in reducing signs of skin aging around eyes.

INTRODUCTION
Evidence of the signs of aging skin often first appears in the periorbital area including wrinkles around the eye, eyelid bags, circles around the eye, or a tired look.1,2 Cheek descent and hollow tear trough, prolapase of orbital fat, skin laxity and sun damage, and eyelid fluid are the primary cause for the formation of lower eyelid bags.3 The tear trough depression is characterized by loss of subcutaneous fat with thinning of the skin over the orbital rim ligaments combined with cheek descent. Orbital fat prolapse is recognized by the characteristic shape of the orbital fat compartments. In addition, loss of skin elasticity is a critical feature of eyelid aging, leading to wrinkles including Crow’s feet, color and texture changes, and festoon formation. Eyelid fluid accumulation occurs with systemic edema or local edema such as from allergic reaction or dark circles. Dark circles under the eyes, which are both both cosmetic concern for many individuals, are primarily caused by a combination of melanocytosis or post-inflammatory hyperpigmentation.4 Thinning of infraorbital skin and excessive vascularity making the subcutaneous blood vessels more visible is believed to be the second common primary cause of dark circles.2 The present multi-center study aimed to investigate a novel eye cream which contained a proprietary mixture of human growth factors and cytokines (called PSP or ‘processed skin cell proteins’) for periorbital rejuvenation. The mixture is obtained through a biotechnology process using cultured fetal skin cells from a dedicated cell bank. A skin cream with the identical mixture of human growth factors and cytokines as contained in the eye cream was recently shown to significantly reduce signs of facial wrinkles and to improve skin texture.5 The eye cream further contained caffeine, bisabolol, glycyrrhetinic acid and sodium hyaluronate. Eyelid skin is the thinnest in the body, of fragile nature and important function making the area particularly difficult to treat.4

METHODS

Inclusion criteria
- Female between 35 to 65 years of age of good general health not nursing or pregnant with demonstrable fine or deep wrinkles around both eyes, at least barely visible dark areas, and at least slightly coarse and grainy lower eyelids.
- Subjects with any active or any history of skin disease affecting the face or peri-orbital area and includes wrinkles, eyelid bags, circles around the eye, or a tired look.
- Subjects who have undergone blepharoplasty or cosmetic surgery affecting periorbital skin

Exclusion criteria
- Use of any over-the-counter products, eye pads or facial masks other than sunscreen products within one month prior to study entry
- Subjects with any active or any history of skin disease affecting the face
- Subjects who have undergone blepharoplasty or cosmetic surgery affecting periorbital skin

Treatment regimen
- Application of processed skin cell proteins containing eye cream (provided by Neocutis, Inc.) in morning and evening to the periorbital skin area of the randomized half-face over a period of six weeks (42 days)

Evaluation at baseline and after 6 weeks
- Clinical photography under standardized conditions. Where available, the VISIA-CR imaging system (Canfield Scientific, Inc., Fairfield, NJ) was used
- Clinical assessment of quality of periorbital skin using 4- to 5-point visual scoring system given in Table I
- Self assessment of quality of periorbital skin by subject using questionnaire given in Table II

RESULTS

Of the 40 subjects enrolled, 37 subjects averaged 50 ± 9 years of age (between 36 to 65 years) completed the study. Three subjects dropped out of the study for product unrelated reasons.

CONCLUSIONS

The present study demonstrated that an eye cream containing a proprietary mixture of human growth factors and cytokines5 combined with caffeine, bisabolol, glycyrrhetinic acid and sodium hyaluronate is efficient for periorbital skin rejuvenation in case of mild to moderate periorbital skin aging. The cream’s efficacy, excellent tolerability in the delicate periorbital skin area, and pleasant sensory properties explain why a large majority (78%) would continue regular use.

REFERENCES

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