Clinical Evaluation of a Thiamidol-based Cream for Treatment of Periorbital Hyperpigmentation

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Abstract

Background: Periorbital hyperpigmentation caused by various factors including genetics, photodamage, sleep deprivation, and allergies are a visible concern for many patients. Additional pigmentation and shadows may be due to skin laxity and wrinkles, as well thin, translucent skin. Periorbital hyperpigmentation can present as brown pigmented and blue vascular types, with most patients presenting with both types. Thiamidol is a potent inhibitor of human tyrosinase and has been shown to be effective in management of facial hyperpigmentation.

Objectives: These studies aimed to evaluate the efficacy and tolerability of a Thiamidol-based cream with skin strengthening active oligonucleotides and hyaluronic acid in the reduction of periorbital hyperpigmentation.

Materials and Methods

Efficacy Study: A split-face, clinical study of females (n=33, Fitzpatrick Skin Types II-VI) with vascular, pigmented, or mixed periorbital hyperpigmentation was performed with twice-daily application of a Thiamidol-based under eye cream vs untreated control for 12 weeks to evaluate reduction of pigmentation. Outcome evaluations included expert clinical grading, self-grading, and a self-assessment questionnaire.

Tolerability Study: Tolerability was evaluated in females (n=33, 65.7% sensitive skin) that applied the Thiamidol-based under eye cream twice daily to face for 2 weeks. Dermatologic and ophthalmologic assessments were conducted at baseline and study end.

Product-In-Use Study: Female volunteers (n=120) were included in a 4-week product-in-use study, with a self-assessment questionnaire on product performance at end of Week 4.

Results: Improvement in periorbital hyperpigmentation was measured in 63.6% of subjects after 12 weeks of twice daily application, with improvements in hyperpigmentation, skin evenness and radiance observed as early as Week 2 and continuing to improve through Week 12. Very good tolerability was demonstrated following both dermatologic and ophthalmologic assessment, even for subjects with sensitive skin. After 4 weeks of product use, 98% of subjects confirmed that the Thiamidol-based cream had a long-lasting reduction of dark circles, reduced wrinkles and lines and provided radiant skin.

Conclusion: Thiamidol, when combined with skin strengthening active oligonucleotides and hyaluronic acid, can be an effective treatment option for patients with periorbital hyperpigmentation.

Results

FIGURE 1. Clinical Improvement in Periorbital Hyperpigmentation. The severity of periorbital hyperpigmentation was performed by an expert grader on an analog scale (1=intense dark periorbital hyperpigmentation; 10=little to no periorbital hyperpigmentation) at Week 12 following twice daily application of Thiamidol-based cream in a split-face study in females (n=33, phototypes II-VI) presenting with vascular, pigmented, or mixed periorbital hyperpigmentation.

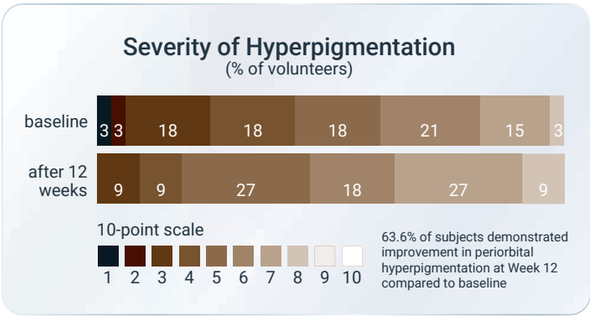


FIGURE 2. Clinical photography (cross-polarized) after 12 weeks of split-face treatment with a Thiamidol-based cream.

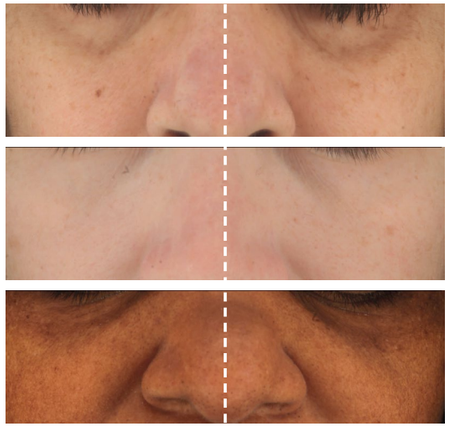


FIGURE 3. Self-grading of periorbital hyperpigmentation, skin evenness, radiance, wrinkles and healthy appearance at Weeks 2 and 12 post-treatment with a Thiamidol-based cream. Subjects conducted a self-grading for each category using a 10-point analog scale at Weeks 2 and 12 post-treatment. Improvements relative to baseline are indicated for Weeks 2 and 12.

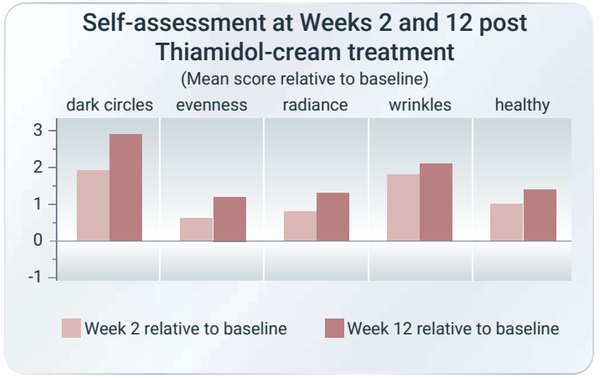
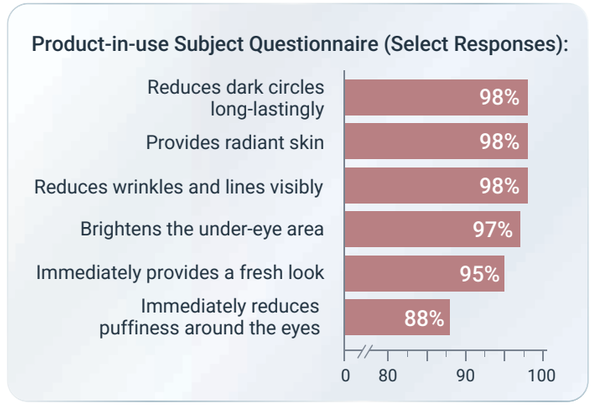


FIGURE 4. Product-in-Use Survey. Subjects completed a self-assessment questionnaire at Week 4 after daily use of the Thiamidol-based cream for treatment of periorbital hyperpigmentation.



Summary and Conclusions

- Periorbital hyperpigmentation is a major concern for patients, impacting their quality of life
- Periorbital hyperpigmentation can be mediated by genetics, photodamage, sleep deprivation, allergies, skin laxity and wrinkles
- Recently, Thiamidol (isobutylamido thiazolyl resorcinol) has been identified as an effective inhibitor of human tyrosinase with efficacy for treatment of facial hyperpigmentation
- A Thiamidol-based cream with skin strengthening active oligonucleotides and hyaluronic acid was evaluated for efficacy and tolerability in females with periorbital hyperpigmentation
- Improvement in periorbital hyperpigmentation was measured in 63.6% of subjects after 12 weeks of twice daily application, with improvements in hyperpigmentation, skin evenness and radiance observed as early as Week 2 and continuing to improve through Week 12
- Very good tolerability was demonstrated following both dermatologic and ophthalmologic assessment, even for subjects with sensitive skin
- After 4 weeks of product use, 98% of subjects confirmed that the Thiamidol-based cream had a long-lasting reduction of dark circles, reduced wrinkles and lines, and provided radiant skin
- These studies demonstrate that a Thiamidol-based cream with skin strengthening active oligonucleotides and hyaluronic acid has a potential role for the treatment of periorbital hyperpigmentation and should be considered as part of a daily treatment regimen

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