

Effects of PRK 124 (0.125%) Lotion in Acne Rosacea

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Introduction

Rosacea is a common chronic facial dermatosis that is characterized by persistent erythema, telangiectasia, papules and pustules. The pathophysiology of rosacea is unclear and therefore, treatments are often unsatisfactory. Patients with rosacea are often unable to tolerate extended treatment periods with topical agents secondary to skin sensitivity that accompanies rosacea. Due to the chronic nature of rosacea, there is a continuing need for efficacious treatments that provide sustained relief of its principal signs and symptoms.

PRK 124 (furfuryl tetrahydropyranyladenine) is a plant cytokinin shown to have growth modulatory, anti-oxidative and anti-senescent effects in human skin cells. Recent clinical studies showed that PRK 124 (0.1%) treatment was well tolerated and improved the appearance of photodamaged facial skin including decreasing fine wrinkles, roughness and mottled hyperpigmentation after 12 weeks of use.¹ Treatment with PRK 124 furthermore decreased skin transepidermal water loss (TEWL) and also increased skin moisture content.

The primary objective of this study was to determine the efficacy and tolerability of a lotion containing PRK 124 (0.125%) for improving the clinical signs and symptoms of mild-to-moderate inflammatory facial acne rosacea.

Study Design and Methods

Twenty-four healthy male and female subjects (age>21 years old) with mild-to-moderate facial acne rosacea participated in this single center, open-label study. The subjects applied PRK 124 (0.125%) lotion to the entire face twice daily (once in the morning and evening) for 12 weeks. A sunscreen with SPF 30 was applied daily after the morning application of the PRK 124 lotion. Subjects were evaluated at baseline, 4, 8 and 12 weeks. Evaluations included physician assessments of inflammatory lesion count, severity of erythema and telangiectasia, and overall clinical improvement. Patient assessments of signs and symptoms of rosacea and skin tolerance were also rated at each follow-up. In addition, transepidermal water loss (TEWL) measurements and facial photography were done at each visit. Twenty-one subjects out of the 24 enrolled have completed 12 weeks of treatment.

Results and Conclusions

After 12 weeks of treatment, there was overall clinical improvement in 80% of subjects (Figure 1), including reduction of erythema (Figure 2,3) and papules (Figures 3).

Figure 4

TEWL measurements showed a 22% decrease in water loss which supports an improvement in skin barrier function.

Figure 1

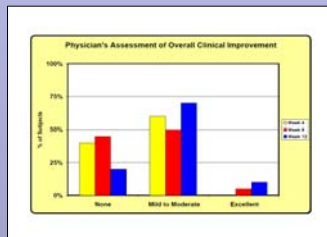
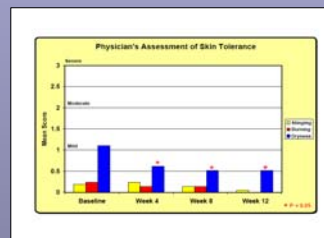


Figure 2



Figure 5

Treatment with PRK 124 lotion produced a progressive decrease in rosacea-associated symptoms (burning, stinging, dryness).



All subject self assessments showed good tolerability (Figure 6) and cosmetic acceptability (Figure 7) to PRK 124 lotion.

Figure 3

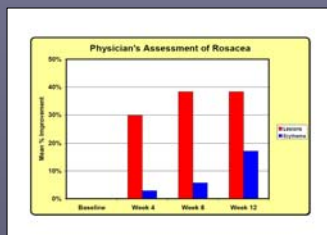


Figure 6

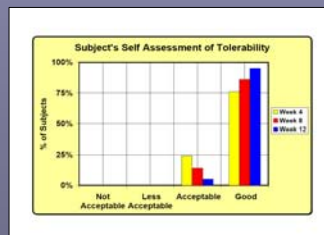
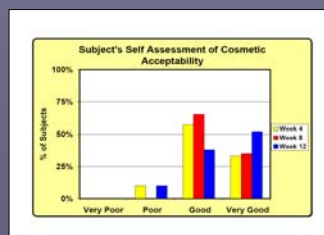


Figure 7



References

1. McCullough JL, Garcia RL, Reece B: A clinical study of topical Pyratinine 6™ (0.10%) for improving the appearance of photodamaged skin. *Journal of Drugs in Dermatology* 7:131-135, 2008

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Conclusion

The results of this study suggest PRK 124 (0.125%) lotion is a well-tolerated moisturizing lotion option for reducing the signs and symptoms of mild-to-moderate facial acne rosacea. In view of the promising results, the current study has been extended to 48 weeks to investigate long-term safety and efficacy.