Stabilized Cysteamine 5% Cream for the Treatment of Senile Lentigo

Nasrin Saki, MD, Shiraz University of Medical Sciences

Why focus on Lentigo?
- Solar lentigines are macules and hyperpigmented patches ranging from a few millimeters to a few centimeters.¹
- The prevalence of solar lentigo is associated with aging, in which 90% of white-skinned people over the age of 60 years have these lesions.²
- In 2008, a study shows the impact on Quality of life of lentigo: >40% of 105 US patients with lentigo were embarrassed because of their skin.
- Topical depigmenting products are usually ineffective for the treatment of lentigines. Lentigines are also resistant to TRIPLE COMBINATION therapy, as indicated by Dr Kligman.³
- The prevalence of solar lentigo is associated with non-treatment arm (40% reduction in non-treatment arm) vs 2% reduction in non-treatment arm (p<0.005).

What is Cysteamine?
- Cysteamine is an aminothiol derived from coenzyme A degradation in mammalian cells and is naturally found in human breast milk. Serving as intracellular anti-oxidant, Cysteamine has anti-carcinogenic effect.¹
- Chavin first discovered the potent depigmenting effect of Cysteamine in vivo in 1966.² But its topical use was historically prohibited due to a very offensive odor and rapid oxidation.
- Scientists developed in 2012 a unique stabilization method that allowed the use of Cysteamine topically.
- Multiple studies have demonstrated the significant efficacy in the treatment of melasma⁴ and PIH⁵, with comparable or better results than Hydroquinone⁶⁷ and mesotherapy with Tranexamic acid.⁸
- Cysteamine has a broad action in the regulation of melanogenesis:
  - Enzymatic effect: inhibition of tyrosinase and peroxidase.
  - Chemical effect: chelation of mineral ions, preventing Fenton-type reactions.
  - Antioxidant: lightening of dark melanin in stratum corneum.
  - Cascade reaction: increase of intracellular glutathione, amplifying natural depigmenting effects.

Results with Cysteamine 5%

- Randomized, double-blind; 30 subjects with dorsal hand lentigines
- Cyspera® Cysteamine 5% from Scientis vs vehicle, 15-minutes daily short contact; Sunscreen daily
- Material & Methods
  - Colorimetry and visual analogue scale (VAS) at baseline, 4-weeks, 8-weeks and 12-weeks
  - Cyspera® Cysteamine 5% Cream for the Treatment of Senile Lentigo
  - Randomized, double-blinded; 30 subjects with dorsal hand lentigines
  - Colorimetry and visual analogue scale (VAS) at baseline, 4-weeks, 8-weeks and 12-weeks
  - Mean age 49.5; Gender 8:22 M:F distributed equally

Material & Methods

- Colorimetry and visual analogue scale (VAS) at baseline, 4-weeks, 8-weeks and 12-weeks
- 40% reduction in colorimetry (p<0.002) vs 2% reduction in non-treatment arm (p=0.405)
- 40% reduction in VAS (p<0.001) vs 2% reduction in non-treatment arm (p<0.245)

Material & Methods

- Randomized, double-blind; 30 subjects with dorsal hand lentigines
- Cyspera® Cysteamine 5% from Scientis vs vehicle, 15-minutes daily short contact; Sunscreen daily
- Colorimetry and visual analogue scale (VAS) at baseline, 4-weeks, 8-weeks and 12-weeks
- Mean age 49.5; Gender 8:22 M:F distributed equally

Conclusion

- Significant improvement of senile lentigos after 12 weeks
- 40% reduction of colorimetry
- Topical Cysteamine (Cyspera®) is one of the first monotherapy treatments demonstrating significant efficacy in reduction of dorsal hand lentigines by all evaluation methods.

References