

Novel Use of a Topical Growth Factor Serum with 1927nm Fractional Thulium Laser for Hair Regrowth in Refractory Central Centrifugal Cicatricial Alopecia

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Background

- It presents with central scalp hair loss that spreads centrifugally and often includes burning or itching.
- Central Centrifugal Cicatricial Alopecia (CCCA) is a chronic, scarring alopecia primarily affecting African American women.
- CCCA is difficult to treat due to permanent follicular scarring, with limited regrowth even after standard therapies like ILK, doxycycline, and PRP.
- This case explores KeraLase: a novel treatment combining a 1927nm fractional thulium laser, topical biosynthetic growth factor serum, and red -light therapy to enhance delivery and stimulate follicular activity.

Objective

To evaluate the effectiveness of KeraLase therapy in a patient with longstanding, treatment-refractory CCCA.

Methods

Treatment protocol:

- Four PRP treatments between June 2023–Jan 2024 (minimal improvement).
- Switched to KeraLase: 4 sessions between May–Sept 2024.
 - Step 1: 1927nm fractional thulium laser to create microchannels.
 - Step 2: Apply 7 mL of growth factor serum (encapsulated in nanoliposomes).
 - Step 3: 20 min of red-light therapy to enhance absorption and scalp circulation.

Patient: 36-year-old African American woman with 10-year biopsy-confirmed CCCA, refractory to prior treatments including ILK and PRP.



Figure 1. Baseline photo prior to treatment



Figure 2. A. After 2 weeks of topical use. B. After 4 PRP procedures and concurrent topical use.



Figure 3. A. After 2 KeraLase procedures and concurrent topical use. B. After 4 KeraLase procedures and concurrent topical use.

Results

- Minimal hair regrowth with PRP alone.
- Significant visible improvement after 2 KeraLase sessions.
- Near complete hair regrowth after 4 sessions.
- The patient now alternates PRP and KeraLase every 3 months and maintains results.
- Reports increased self-confidence and sustained hair density.

Discussion

KeraLase offers non-invasive intradermal delivery of potent growth factors.

Benefits over PRP:

- Consistent growth factor concentration
- Reduced dependence on patient's biology

Works via:

- Anti-inflammatory effects
- Stem cell activation
- Vascular stimulation

Promising for late-stage, scarring alopecias like CCCA where traditional methods fail.

Conclusion

KeraLase therapy—when combined with ongoing topical and PRP protocols—represents a novel and promising approach to stimulate regrowth in refractory CCCA. Further studies are needed, but this case demonstrates visible, durable improvement in a patient with 10 years of scarring alopecia.

References

