



REVIEW ARTICLE

Use of Verteporfin to Regrow Hair and Reduce Fibrosis after Transplantation

Melissa Toyos, MD^{1*}, Rolando Toyos, MD², Allison Toyos, BS¹

¹Toyos Clinic 160 W 18th St, New York City, NY 10011, USA

²Rolando Toyos, MD Toyos Clinic 6465 North Quail Hollow Road, TN 38120, USA

*Corresponding author: Melissa Morrison Toyos, MD Toyos Clinic 160 W 18th St, New York City, NY 10011, USA



Verteporfin is FDA-approved for wet macular degeneration. Recent Stanford research has revealed a novel use for verteporfin promoting scarless skin regeneration by inhibition of Yes-associated protein (YAP), preventing the activation of En1-positive fibroblasts causing scars [1-7].

A 27-year-old female underwent uncomplicated transplantation of one thousand grafts was placed. After donor removal, subject received 1 cc of 1mg/cm verteporfin on right side of incision and no treatment in the left. Neosporin ointment was used postoperatively on the donor area for one week and subject instructed to avoid direct sunlight for 10 days. Patient healed well. Baseline density was measured on the donor site to be 13x18 mm. At one month control density was 12x16

and intervention was 14x18 with objectively increased density. At 8 weeks, control density remained 12x16 and intervention was 20x21 with similar textured hair but denser compared to control.

Regrowth of hair, reduction of scarring and normal skin regeneration is advantageous for cosmesis and functional recovery after transplant. Known treatments are topical antibiotics, growth factors, platelet rich plasma and acellular dermal matrix. Further study is warranted.

References

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Figure 1: Comparison of donor sites at 8 weeks post-operatively with verteporfin 1 mg/cm² injected subcutaneously on right side and control on left.