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"Topical Timolol for Improving the Appearance of Surgical Scars following Mohs Surgery with Subsequent Primary Linear Closure: Results from a Split-Scar Clinical Trial"

Background: Topical timolol has shown promise in improving the healing time and cosmesis of ulcerated or chronic non-healing wounds, but little research exists exploring its efficacy in the reconstruction of postoperative surgical defects following Mohs micrographic surgery (MMS).

Objective: To compare cosmetic outcomes of dermatologic surgical scars when 0.25% timolol solution is added to standard wound care following MMS with subsequent primary linear closure.

Methods: Nineteen adult patients undergoing MMS for non-melanoma skin cancer with subsequent primary linear closure measuring at least 4 centimeters in length were enrolled in a split-scar, double-blinded prospective trial in which one-half of the wound was treated with 0.25% timolol solution plus standard postoperative wound care (timolol group) and the other half of the scar was treated with standard postoperative wound care alone (control group). Serial postoperative photographs were individually assessed by three independent physicians for objective cosmetic improvement at follow up periods of 1-2 weeks, 4-6 weeks, and 9-12 weeks.

Results: No statistically significant differences in physician-reported improvement in scar cosmesis were observed between the two groups at any point during the follow up period regardless of age, sex, or anatomic location ($p > 0.5$ in all cases).

Conclusion: The results of this study suggest a limited role for topical timolol in improving the cosmesis of linearly approximated wounds following Mohs surgery.