

# Silicone-based Scar Cream for Post Upper Eyelid Blepharoplasty-associated Cicatricial and Hypertrophic Scarring

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## ABSTRACT

**Purpose:** Silicone cream has been shown to improve the appearance of postoperative scars. Nevertheless, surgeons may incorporate intralesional wound modulators such as a triamcinolone and/or 5-fluorouracil (5-FU) for scars that do not completely heal well or those that do not completely respond to other treatment options such as silicone cream. This study sought to determine whether a silicone-based topical scar cream that incorporates selective growth factors can help reduce the incidence of postoperative cicatricial and hypertrophic changes in upper eyelid blepharoplasty incisions.

**Methods:** This is a single-surgeon, retrospective chart review of patients that underwent a cosmetic upper eyelid blepharoplasty. Subjects were divided into two cohorts depending on whether they received postoperative topical scar cream (SKN2017B) twice daily for 3 months versus no topical scar treatment. Using a modified Vancouver Scar Study Scale for treatment criteria, the incidence of focal intralesional injections of triamcinolone and 5-FU to targeted areas of cicatricial and hypertrophic changes was compared between the two groups.

**Results:** 272 eyelids were identified, of those, 132 eyelids received no treatment and 140 were treated with SKN2017B. 43.9% of eyelids that did not receive treatment underwent intralesional injections of triamcinolone and 5-FU, and 22.9% of eyelids treated with SKN2017B underwent intralesional injections of triamcinolone and 5-FU. The difference between the two groups was found to be statistically significant ( $P < 0.05$ ). No adverse reactions were reported from either group.

**Conclusion:** The use of a topical silicone-based scar cream has been shown to be safe and effective in decreasing the incidence of intralesional injections of triamcinolone and 5-FU for postoperative cicatricial and hypertrophic changes in upper eyelid blepharoplasty incisions.

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## INTRODUCTION

Upper eyelid blepharoplasty, one of the most common plastic surgery procedures performed, involves surgically excising excess upper eyelid skin to provide an aesthetically rejuvenated appearance to the periorbital area.<sup>1,2</sup> In severe cases of excess upper eyelid skin, the procedure can also provide functional improvement to the patient's visual field. In a routine upper eyelid blepharoplasty procedure, the incision is strategically made along the natural eyelid crease to conceal visible scarring and create the best aesthetic outcome. Given the minimal tension and thin anatomy of the upper eyelid skin, upper eyelid incisions heal relatively well.<sup>3,4</sup> Despite this, there may be instances where some patients may be troubled by the appearance of unappealing cicatricial and hypertrophic changes that may arise postoperatively. They can present as either focal, raised areas or diffuse thickening of the entire scar. Although these changes are often minor and usually improve with time, they can be bothersome, especially for those that undergo an upper eyelid blepharoplasty for aesthetic reasons. Attempts have also been made to investigate whether the type of instrument used for the skin incision can improve the healing and appearance, but a recent prospective multicenter

study found no difference between Colorado microdissection and a scalpel.<sup>5</sup> Furthermore, there is a paucity of literature supporting the optimal suture material and the type of wound closure for an upper eyelid blepharoplasty, and surgeons often rely on their formal training and personal experience for their choices in wound closure. However, one study of note showed the least incidence of complications and revisions for post upper eyelid blepharoplasty incisions with the use of a running suture along with two interrupted sutures (placed medial and laterally) in a large single-surgeon prospective study.<sup>6</sup>

Depending on certain scenarios and the surgeon's experience with scar management, postoperative cicatricial and hypertrophic scar tissue may necessitate treatments such as the application of a topical silicone-based cream and/or intralesional injections of triamcinolone with or without 5-fluorouracil (5-FU). Although an off-label use, 5-FU has been shown to be safe and effective in the dermatologic, ophthalmic plastic, facial plastic, and plastic surgery fields.<sup>7-12</sup> For over 20 years, intralesional injectable 5-FU has been used as a safe and effective adjunct treatment with triamcinolone or primary treatment for