

Comparison of Colorado Microdissection Needle versus Scalpel Incision for Upper and Lower Eyelid Blepharoplasty

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Background: Different tools can be used to incise skin in eyelid surgery. Although some surgeons believe a scalpel is superior, others prefer a Colorado needle. No formal study has been performed to compare these two modalities in blepharoplasty surgery.

Purpose: To compare ecchymosis, cosmesis, and histological tissue damage of incisions made with a scalpel or Colorado needle in patients undergoing upper and lower blepharoplasty.

Methods: This is a multi-center, prospective, interventional, comparative case series. Patients underwent bilateral upper and/or transcutaneous lower blepharoplasty with one side randomly selected for skin incision with the scalpel, the other side with the Colorado needle. Ecchymosis was evaluated using a 10-point Likert scale and the wounds using a Hollander score. The margins of excised tissues were evaluated histologically.

Results: A total of 254 eyelids of 101 patients were included in the study. No significant difference was observed in ecchymosis on day 1 and 7 and scar cosmesis on day 30 and 180 between the two techniques. Histologically necrosis was noted only with the Colorado needle sides. (p=0.001)

Conclusion: No clinical difference is noted between Colorado needle and scalpel incisions in terms of ecchymosis and scar cosmesis after blepharoplasty.

Precis: In upper and lower blepharoplasty incisions, no clinical difference in ecchymosis or scar cosmesis is noted in using the Colorado needle or scalpel. This suggests that surgeons may use either cutting modality for blepharoplasty surgery with regards to the ultimate cosmetic result. However, histological tissue damage is evident with use of the Colorado needle.