

COMPARISON OF PEAK PLASMABLADE VERSUS EITHER COLORADO MICRODISSECTION NEEDLE OR SCALPEL INCISION FOR AESTHETIC AND FUNCTIONAL UPPER EYELID BLEPHAROPLASTY

Purpose: * Recent studies have compared the Colorado monopolar needle with scalpel incisions in terms of early postoperative ecchymosis and scar cosmesis after upper eyelid blepharoplasty. The PEAK PlasmaBlade is a novel, low-thermal-injury electrosurgical instrument which may provide clinically meaningful advantages over conventional upper eyelid surgery for wound healing.

Methods: * Single-centre, prospective, randomized, double-blind, interventional, comparative case series. Informed written consent was provided by each patient. Patients underwent bilateral upper eyelid blepharoplasty in all cases. Each eyelid was randomized to either PEAK PlasmaBlade, scalpel/ scissors or Colorado monopolar needle. Ecchymosis was evaluated using a 5-point haemorrhage scale and the wounds using the Stonybrook scar score. The margins of excised tissues were evaluated histologically.

Results: * 30 eyelids of 15 patients were included in the study. All patients had cosmetically acceptable results. No significant difference was observed in ecchymosis on postoperative day 1 and 7 and scar cosmesis at week 1 and month 3 between the three techniques. Histologically, there was a significant increase in haemorrhage using the scalpel compared to the PEAK PlasmaBlade and Colorado needle. Mean electrocautery effect was greater with the PEAK PlasmaBlade compared with the Colorado needle.

Conclusion: * No difference is noted between the PEAK PlasmaBlade, Colorado needle and scalpel incisions in terms of ecchymosis and scar cosmesis after upper eyelid blepharoplasty. Important considerations when performing blepharoplasty surgery include surgical experience, anatomical knowledge, careful planning and discussion with the patient to ensure optimal functional and aesthetic results.