

# Recovery From Deep-Plane Rhytidectomy Following Unilateral Wound Treatment With Autologous Platelet Gel

## *A Pilot Study*

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**Objective:** To determine the effects of treatment with autologous platelet-rich plasma mixed with thrombin and calcium chloride to form an autologous platelet gel (APG) on postoperative recovery from deep-plane rhytidectomy.

**Study Design:** A prospective, randomized, controlled pilot study.

**Setting:** An accredited ambulatory facial plastic surgery center.

**Patients:** Healthy volunteer women (N=8) undergoing rhytidectomy.

**Intervention:** Unilateral autologous platelet-rich plasma wound treatment during standard deep-plane rhytidectomy.

**Main Outcome Measures:** Staged postoperative facial photographs were graded in a blinded fashion by 3

facial plastic surgeon reviewers for postoperative ecchymosis and edema. Each facial side treated with APG that demonstrated less edema or ecchymosis than the non-APG-treated side was designated a *positive* response; otherwise, the response was *equal* (no difference) or *negative* (untreated side had less edema or ecchymosis).

**Results:** Twenty-one positive and 21 equal responses were observed compared with 8 negative ones. Of 20 unanimous observations, 15 were positive, only 3 equal, and 1 negative.

**Conclusions:** Treatment with APG may prevent or improve edema or ecchymosis after deep-plane rhytidectomy. This trend is more apparent for ecchymosis than for edema, and is chiefly demonstrable in the early phases of recovery. These observations are consistent with previous reports of cell tissue culture and wound response to concentrated platelet product.

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