



## External Quilting Sutures to Prevent Hematomas in Facelifts

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### Letter to the Editor

One of the major complications of facelifts is the development of hematomas in the night after the surgery. A hematoma is defined as a collection of blood that requires formal drainage and is not amenable to treatment by simple aspiration. The reported incidence of hematomas in facelifts varies from 0.2% to 12.9% [1-6]. This event obligates the operative team to come back to the hospital late at night to drain it in the ward or to return the patient to the operative room, adding more cost to an already expensive operation and causing more stress to the patients, surgical and anesthetic teams. Before the use of external quilting sutures we can divide our results in two groups: The first one, comprising 200 patients, (between September 2006 and January 2009), where for the whole face infiltration was used 0.5% lidocaine and 1:200.000 epinephrine solution. The incidence of hematomas in this group was 12% (24 out of 200 patients). The second group, facelifts performed between February 2009 and September 2010, comprised 83 patients where in each case it had been used a solution of 0.5% of lidocaine without epinephrine to infiltrate the middle an inferior thirds of the face, following the recommendations of Jones and Grover [7], that never gained widespread acceptance among plastic surgeons. The incidence of hematomas in the second group was reduced to 3.6% (3 out 83 patients). Clearly, the removal of adrenaline from the solution was important but, not by itself sufficient to reduce the incidence of hematomas to zero or near it. We also have created a third group of patients, facelifts performed between October 2010 and December 2020 (10 years of experience), comprising 985 patients where external quilting suture were used, reducing the incidence of hematomas to near zero (0.20%, 2 out of 985 patients). Hematomas in facelifts were very common despite the use of many preventive measures such as different types of suction and Penrose drains. Valsalva manuevres, use of fibrin glue [8], removal of adrenaline from the local anesthetic solution [7], and different types of compressive dressings. None of these seemed to be completely effective in avoiding hematomas, therefore leaving the surgical team uncertain as to whether a return to the operating table would be necessary. The external quilting sutures have proved to be most important single measure to avoid hematomas in facelifts and it has been of compulsory use in hundreds of our patients, for more than 10 years, reducing the incidence of hematomas to nearly zero. This was the most important single measure to avoid hematomas. All the other measures, even when used in conjunction with each other, were unable to prevent completely the occurrence of hematomas. Contrary to what has been commonly thought, the quilting sutures will lessen flap tension and will prevent skin flap necrosis. The technique adopted for carrying out the external sutures is as follows. The suture is started externally in the skin, using vicryl 4-0 with a cylindrical needle that goes deep to the platysma and SMAS and returning to the skin again, tied without tension, forming a knot. The knot is tied directly above the skin. The knots follow the direction of the flap traction, and one should try to keep all the sutures parallel to each other (Figure 1). The sutures are kept in place only for two days, leaving no permanent marks on the skin. They are also successfully used in the submental region and lateral neck areas. Despite their strange appearance when seen and used by surgeons for the first time, they have proved to be very effective in hematoma prevention. The quilting sutures were carried out from the flap base to its extremity, pulling the flap above with one hand following the ideal antigravity vector. The average of sutures per side was around twenty-five to thirty two knots. We observed that when using epinephrine in the solution (even in concentration of 1:400.000) the dressing where more wet and there was a tendency to hematomas among the quilting sutures. We always use lidocaine without epinephrine to infiltrate the face and neck in all of our patients, except to infiltrate the frontal and temporal region and the facial and submental incisions. The flaps maintain its normal color and the bleeding veins may be identified and coagulated in the subcutaneous plane. Hematomas did not occur even in cases where the patient was woken up before the dressings had been completed, or had suffered several episodes of vomiting in the immediate postoperative period. Finally, thanks to the quilting

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**Figure 1:** Quilting sutures, used in the face and neck. The Penrose drains are taken by the sutures. The sutures and the drains are removed in the second postoperative day.

sutures the surgical team was spared the lurking anxiety, which they experienced before. The ghost of hematomas was finally laid to rest.

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