

A comparative study of lower eyelid liposuction vs sub-ciliary blepharoplasty in cases of lower peri-orbital fat herniation

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Setting: A prospective randomized comparative case series study performed at Ain Shams University Hospital, Cairo, Egypt.

Background: Classic lower lid blepharoplasty is the goldstone in reforming lids with herniated fat. Sub-ciliary incision through the skin, although usually invisible, is not devoid of complications as hematoma, scarring and lid retraction. Performing lower fat liposuction through a skin puncture is set out versus sub-ciliary approach of fat herniation.

Patients: Forty patients (80 lower eyelids) suffering from lower fat herniation were double-blindly randomized into 2 groups, each of 20 patients (40 eyes): A; fat excision through a sub-ciliary trans-septal approach, and B; lipo-suction through a lid margin skin puncture.

Methods:

Group A: Following infiltration by a fluid mixture made by adding 6.25 ml sodium bicarb + 1 mg adrenaline + xylocain 20 ml of 2% soln to 200 ml normal saline 0.9 %, a sub-ciliary incision, 2 mm from the lid margin was made, 20 mm in length, centered over the mid-pupillary axis. Sub orbicularis dissection was performed down to the lower arcus marginale. The orbital septum was then opened with Wescott's scissors next to the margin. A titrated crushing and excision of herniated fat was then performed. No skin was excised. Neither the septum nor the orbicularis were sutured. The skin incision was sutured using 7/0 proline interrupted stitches. Half the sutures were removed on post day 5, the other half on day 7.

Group B: Intradermal xylocain 2% injection was given at the lateral end of the lower lid margin next to the lateral canthus, A **2mm (18 G) disposable plastic cannula** or re-usable **metal cannula** with Leuer lock end was used to make a single puncture. Same fluid mixture used in Group A was injected at the sub-septal space to make the area tumescent. To and fro repeated movements of the cannula during injection were made with the cannula opening facing down to create extensive pre tunneling and to homogenize the central, and/or the medial lower peri-ocular fat lobes into a thick fluid mixed with the injected fluid. This was continued till a within-fluid-movement was felt. Once the fat started to come out into the syringe without exerting negative pressure, suction was applied to withdraw the emulsified fat mixture. A 1:1 wet :aspiration technique was tried to be practiced. No sutures were applied, and the tip of the 18G cannula was left hanging out of the puncture to drain. Ocular bandage was applied for 6 hrs. The area was monitored for hematoma, the pupil for reaction and the drain cannula for fluid every 2 hrs for next 12 hrs. Antibiotic and steroid eyedrops were instilled for 7 days, and systemic NSAID was given for 3 days in both Groups.

Results: Postoperative haematoma appeared in 28 eyes (70%) in Group A vs 8 eyes (20%) in Group B. Skin scar was noticeable in 8 eyes (20%) vs 1 (2.5%). Only one patient (5%) suffered from bilateral lower lid retraction in Group A vs none in Group B.

Conclusion: Liposuction is probably a more cosmetically appealing technique for herniated lower peri-ocular fat than the traditional sub-ciliary skin approach.

Liposuction of the Face:

We use a needle 16 G to do a pin prick after intradermal xylocain injection at pre-auricular area almost at the angle of the mandible.

We use a **2mm 18 G plastic disposable cannula** or a **metal cannula 2 mm in diameter** with Leuer lock end and a single peripheral opening connected to a 10 cc disposable syringe to inject the tumescent fluid mixture which contains 500 ml saline 0.9 % + 6.25 ml sodium bicarb+ 0.5 ml adrenaline 1/10000 + xylocain 20 ml of 2% conc.

We inject 20 - 60 ml subcutaneously at the area which is desired to be aspirated and which contains the previous filler implant.

To an fro repeated movement of the cannula during tumescence fluid injection in the subcutaneous plan with the cannula opening facing down to create extensive pre tunneling and homogenize the fat into a thick fluid mixed with the tumescent mixture.

Hemostasis is good because of the adrenaline.

After reaching an easy movement of the cannula in the subcutaneous plan and tumescent facial skin when you feel that the fat starts to come back in the syringe without even exerting a negative pressure with pulling the pistol of the syringe, we use negative pressure by the syringe fully pulled with the aid of a syringe metal stopper and we use the to and fro movements in different direction.

Sometimes I do more than one opening with the 16 G needle which never leaves any scar. I do this when I feel that I cannot reach the desired area.

When the aspirated material exceeds 5 cc i change the syringe to keep the negative pressure. If less than 5 cc is aspirated and you feel low aspiration power take the syringe out and push the pistol to remove any dead space. Keep on this process until you get aspirated fluid equal to the tumescent fluid injected (1:1 wet aspiration technique).

Try to sculpt the mandible angles and lower face and leave upper cheeks. It takes around one hour.

A face garment exerting pressure on the area aspirated will be used post procedural for at least one week.

Antibiotics and anti inflammatory should be given.

Openings are never stitched and it are not noticeable.

Usually i do not see any bruises or extensive facial edema even the results are much faster than abdominal liposuction.

I did 8 cases now without any side effects or nerve injury seen.