CASE REPORT

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Undesirable Outcomes from Liposuction of the Calves and Ankles, what to Avoid?

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ABSTRACT

Introduction: Liposuction, is amongst the most popular cosmetic surgical procedures worldwide and is pretty safe with a very low incidence of major complications in the hands of skilled plastic surgeons. As a matter of fact, a faultless liposuction of the calves and ankles is near the top of the list in providing a high satisfaction rate. **Aim:** We present a case of 38-year old female with severe complication from liposuction of the thighs, calves and ankles with dimples and contour irregularity. **Results:** The results were very bad aesthetically with over correction liposuction of the calves and a lot of contour surface irregularity, asymmetry, dimples and grooves. We recommended her several procedures of autologous fat grafting in the calves, to improve the contour irregularities, and the patient agreed to it. **Conclusion:** The surgeon should be very cautious in examining the patient in details to see if liposuction of the calves and ankles is the proper procedure to address their interest. Several times it is required to combine different refinement techniques to achieve patients' aesthetic requests and enhance their appearance.

Keywords: adults, intussusception, colocolic, lipoma, malignancy.

1. INTRODUCTION

Liposuction of the calf area removes excess fat and is most effective when defining the contours of the calves, knees and ankles altogether, creating the image of a more globally delicate, refined, and slim leg. As Chamosa said "beauty is based on the different body regions being in proportion to one another, correcting a single area usually leads to an imbalance in the contour of the lower limbs" (1). The aesthetic goal is the achievement of slender leg and ankle contour, but this must be in proportion to neighboring body regions. A slender and appealing leg is defined by three main factors: length, thickness and shape. Since we can not change the length, the shape and thickness can be ameliorated in many surgical and non-surgical ways. Whereas the shape of legs is designated by two factors: muscle buildout and fat dispersal. Fat distribution in lower legs is unfortunately genetically predisposed and stubborn to diet and exercise. As it pertains to the degree of development of musculoskeletal structure of the calves it must be evaluated because it establishes the indication for surgery (2). The reason lies in low satisfaction rates post-liposuction of a calf with hypertrophic muscle even though there is fat in it. Out of all leg flaws, fat over the medial knee is undeniably the easiest to camouflage compared to full calves and ankles. As these imperfections limit women in choosing clothes and so they can lead to low self-esteem and psychological disturbances.

2. AIM

We present a case of 38-year old female with severe complication from liposuction of the thighs, calves and ankles with dimples and contour irregularity.

3. CASE REPORT

A 38-year-old female, weight 63 kg and height 165 cm scheduled a consultation in our private clinic for treatment of calves and ankles. She presented with aesthetic complaints of not being able to wear skirts and dresses showing off her legs. Most complains were about the upper inner thigh fat, medial knee bulge, large calves and ankles. We aim to enhance the message that proper selection of the patient and priorly informed patients about risks and complications, plays an essential role along with surgeon's experience, in

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Figure 1 (a, b). Preoperative photo, 38-year-old female standing flatfooted with tubular lower legs (front view, back view)

Figure 2 (a, b). Postoperative photo after liposuction (back view, front view with contour irregularities, dimples and grooves in the suprapatellar area and calves)

achieving aesthetically pleasant ankles and calves after liposuction.

On examination the fat thickness was evaluated by the pinch test to the medial and lateral ankles and multiples areas in the calf, with a result of less than 1,5 cm in the calves. The pinch test is usually performed with the patient standing flatfooted, and then standing on the toes. The legs appeared to be in a straight line, so we recommended her to undergo thigh liposuction and medial knee not calf, as the calves would also look slimmer after the procedure. We did not discourage the patient from having the procedure done but we did intently tried to lower her expectations.

Pictures were taken with the patient standing flatfooted, front and back view (Figure 1, Figure 2). Afterwards patient went for a second opinion to another plastic surgeon where she also performed liposuction of thighs, middle knee, calves and ankles. After several months she came back to our clinic, very disappointed with the results and asking for help (Figure 3). The results were very bad aesthetically with over correction liposuction of the calves and a lot of contour surface irregularity, asymmetry, dimples and grooves. We recommended her several procedures of autologous fat grafting in the calves, to improve the contour irregularities, and the patient agreed to it.

4. DISCUSSION

Nowadays liposuction is one of the most common and safe cosmetic procedures used to sculpt and remodel a patient's body by getting rid of unwanted fat in specific areas. When examining the patient for liposuction of the calves and ankles, legs are classified by many authors as circumferential or localized heavy legs (3). In the circumferential type, specific fat distributions are not well defined and the leg is considered fat. The indication for liposuction should be done by measuring the degree of development of the musculoskeletal structure of the calf, when the muscle tissue is hypertrophied, then additional procedures will be required, to obtain a slimmer looking leg. Tubular, large leg is mostly the result of bone and muscle configuration rather than fat dispersion alone (4).

Different authors have various recommendations for surgical treatments, but pinch tests of 1.5 to 2 cm of fat at the calf and 1 to 1.5 cm at the ankle are the most implemented standards for surgery (5, 6). Different positions of the legs have been proposed in order to differentiate the thickness of the fat bulges from the underlying muscles and tendons. The fat is evaluated when standing flatfooted, standing on the toes (6) and in the lying position without the calf muscle tensed. Later R. Rohrich proposed a combination of dangling, standing, and sitting position because when muscles relaxes allows better differentiation of tissues in the sitting position (7).

The total complication rate of liposuction is approximately 5%, with most complications being minor (8). In addition, our literature review shows that minimal data exists on risk factors for the development of major complications following liposuction that would minimize the undesirable consequences and reduce healthcare expenditure. The major complications include: postoperative edema (lasting up to 6 months), hematoma, seroma, surgical site infection, bruise, nerve damage even though rare, asymmetry, incision site scar, contour irregularity, pigmentation secondary to bruising (9, 10). The procedure should not be performed in patients with chronic edema, trophic anomalies, and severe varicoses, previous thrombotic events, circulatory insufficiency (9, 11).

When performing liposuction of the calves the surgeon should be very careful to avoid causing dimples. Irregularities, are more common in this area because the fat is relatively thin with dense fibrous tissue and many lymphatics (5, 10). In our case these irregularities are both palpable and visible. Most surgeons believe that some fat should be left behind and avoid attempting to

Figure 3. Postoperative photo after liposuction (Patient in laying back position)

remove all the fat with aggressive suctioning. As Illouz quoted in his commandments “It is not so much what is removed that is important, but what is left behind”.

In our case described above, the patient who was psychologically very concerned about the aesthetic problem, even though we informed her about the risks and complications undergoing calf liposuction, she found another surgeon who was willing to take the risk.

5. CONCLUSION

Liposuction of the lower extremity from the thigh to ankle is an important procedure in the practice of many plastic surgeons. Usually the patient who presents specifically for liposuction of the calves and ankles, is very concerned by this problem and is ready to go under any procedure to fix it. Hence, the surgeon should be very cautious in examining the patient in details to see if liposuction of the calves and ankles is the proper procedure to address their interest. Through decades according to our literature review, liposuction of calves and ankles is considered a “risky area”, and it should only be performed by experienced liposuction surgeons with specific training. Several times it is required to combine different refinement techniques to achieve patients’ aesthetic requests and enhance their appearance.

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