Transient Leg Paralysis After Abdominal Liposuction

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Body contouring and abdominal liposculpturing are among the most popular aesthetic procedures performed by plastic surgeons worldwide. As with all cosmetic procedures, patient comfort and postoperative satisfaction are of paramount concern, particularly when compared with surgeries performed by other surgical specialties. Any sort of complication, major or minor, can cause significant concern for both the patient and the surgeon.

When combined with other cosmetic operations, the lengthened operation time of liposuction procedures increases the risk for deep venous thromboembolism; the liposuction procedure itself increases risk of fat embolism. Various methods have been described to prevent thromboembolism-related complications, including administration of low-molecular-weight heparin, venous embolic stockings, intermittent pneumatic compression devices, patient positioning on the operating table, and atraumatic surgical techniques.

I detail here a case involving abdominal liposculpting combined with reduction mammoplasty that resulted in complications. The patient was a 23-year-old woman treated primarily for macromastia. Bilateral thromboembolic stockings were applied preoperatively, along with a single dose of 0.4 mL Clexane (Sanofi, Paris, France). Bilateral reduction mammoplasty via the superomedial vertical technique was combined with abdominal and flank liposculpturing, all with the patient in the supine position. The liposuction cannulae were 2 to 4 mm. A total of 2000 mL of a modified Klein solution, consisting of 20 mL 2% lidocaine and 1 mL adrenaline (1:1000) per 1000 mL lactated Ringer’s solution, was infiltrated to the supraumbilical, infraumbilical, epigastri c, and bilateral flanks. A total of 1800 mL lipoaspirate was extracted, including approximately 200 mL per flank area, 500 mL from the epigastric area, and 900 mL from the supraumbilical and infraumbilical areas in total. The liposuction was performed in the deep and superficial layers of the abdomen. The operation was completed and abdominal binding applied.

Immediately in the postoperative period, the patient had total paralysis of her right leg. She mentioned experiencing no sensation and an inability to move the leg at all, including the hip flexors and extensors. A closer examination revealed disturbance mainly in the hip flexors. No sign of hematoma, ecchymosis, or other disfigurement was observed in the abdomen or the inguinal region. The leg diameter was normal, and no indication of arterial or venous thromboembolism was observed. This distressing condition lasted 5 to 6 hours, after which sensation returned, starting from distal to proximal. The patient could then ambulate normally.

This condition, although upsetting to the patient, was a transient situation with no further complications. Extended absorption of tumescent infiltration solution applied to the abdominal area may have caused peripheral nerve blockage; that the transient paralysis was resolved in 5 to 6 hours, similar to procedures involving local anesthetics, supports this hypothesis. The most frequent complications associated with liposuction include contour irregularities, seroma, hyperpigmentation, asymmetry, skin necrosis, infection, pulmonary embolism, sepsis, necrotizing fasciitis, perforation of abdominal organs, and even death. Transient paralysis of the lower extremity has not been reported in the literature; this case’s complications, I believe, most probably resulted from migration of the wetting solution to the lower extremity nerves—the femoral nerve in particular. Other causes could be direct nerve injury, unintended mechanical pressure by the nurse over the nerves during the procedure, or patient incompatibility resulting in such a symptom. This could be the patient’s response to surgical stress both physical and psychological.

Given this patient’s complaint and concerns following a simple liposculpturing procedure, surgeons should be mindful of transient complication possibilities, while also applying best practices that help prevent a devastating thromboembolic or traumatic injury in a cosmetic procedure.

REFERENCES


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