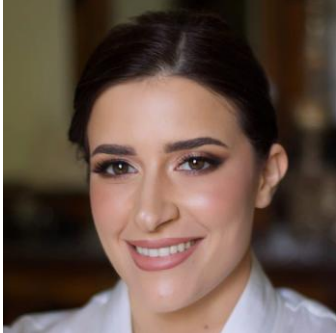


CASE REPORT

Liposuction for lipedema performed with Workstation Pro plus by Moeller

Extensive liposuction of the lower limbs for lipedema



Dr. Michela Schettino
Plastic Surgeon,
CHIREC Hospital Braine
L'Alleud- Waterloo

Abstract

Lipedema is a chronic condition characterized by abnormal fat deposition, often leading to pain and significant impairment of quality of life. Liposuction has proven to be a definitive surgical solution for managing the condition, improving both aesthetics and functionality. This case report explores the application of Workstation Pro plus by Moeller to perform extensive lower limb liposuction, achieving over 6 liters of fat removal in less than three hours.

Challenge

- Safe removal of large fat volumes while preserving lymphatic structures
- Managing intraoperative blood loss and postoperative complications
- Achieving uniform fat removal for aesthetically pleasing results
- Addressing the physical and psychological challenges of patients with advanced lipedema

Solution

The combination of tumescent infiltration and power-assisted liposuction techniques provides an efficient and safe method for addressing lipedema. Utilizing the Moeller Vibrasat Pro and Liposat Pro plus ensures reduced surgeon fatigue and minimizes tissue trauma, critical for lipedema cases.

Setup

The OR setup includes:

- Tubing connected directly to the Liposat Pro plus for infiltration and suction
- Vibrasat Pro with blunt-tipped cannulas of varying diameters for fat extraction
- Thermia Pro to keep the tumescent solution safely at body temperature
- Vacusat power to gently proceed the fat extraction

Tumescent solution and infiltration technique

The tumescent solution is composed of:

- 1 L of saline serum
- 5 mg of tranexamic acid
- 1 ml of adrenaline
- 40 mg of triamcinolone acetonide

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Each procedure uses an average of 4 liters of this solution. The tumescent solution is preheated before the case and kept safely at body temperature by using the Thermia Pro. Following infiltration, a waiting period of 20 minutes is observed to allow for optimal tissue saturation, hemostasis, and hydrodissection.

The Moeller Liposat Pro plus infiltration pump, when operated at full power, creates a strong hydrodynamic effect during infiltration. This effect facilitates efficient separation of fat from connective tissues and minimizes tissue trauma, significantly easing subsequent suction. This advanced infiltration approach provides benefits akin to fluid-assisted tissue preparation, enhancing fat removal efficiency while preserving critical structures.

Surgical Technique

The procedure begins with the infiltration of the tumescent solution. The hydrodynamic effect generated by the Moeller Liposat Pro plus promotes extensive tissue preparation, effectively loosening fat and creating an optimal environment for suction. The Vibrasat Pro is then used with 4 mm Multi-Hole cannulas to perform extensive liposuction. Continuous monitoring ensures the lymphatic structures remain unharmed, and fat is removed uniformly from the lower limbs.

Case Study

A 45-year-old female with Stage III lipedema underwent extensive lower limb liposuction. Over 6 liters of fat were removed in 2 hours and 45 minutes. At six months follow-up, the patient demonstrated significant reduction in limb circumference, improved mobility, and alleviation of pain. She reported high satisfaction with both the functional and aesthetic outcomes.

Conclusion

The application of advanced devices like the Workstation Pro plus enables plastic surgeons to perform high-volume liposuction safely and effectively. The hydrodynamic effect during tumescent infiltration enhances surgical efficiency and safety by reducing tissue resistance and optimizing fat removal. This approach not only optimizes surgical outcomes but also has the potential to alleviate symptoms and improve patient comfort in cases of lipedema.