

Water-assisted liposuction for body contouring and lipoharvesting: safety and efficacy in 41 consecutive patients.

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ABSTRACT

BACKGROUND:

Water-assisted liposuction (WAL) is a new technique for body contouring and fat harvesting that relies on a fan-shaped jet of tumescent solution to anesthetize fatty for liposuction and grafting. As with any new technology, safety and efficacy are paramount.

OBJECTIVE:

The author evaluates the technique and outcomes for small-to-moderate volume liposuction cases treated with WAL in an office setting.

METHODS:

Forty-one consecutive patients were treated with WAL (Body-Jet; Human Med, Eclipse Ltd., Dallas, Texas) in the author's private practice for mild-to-moderate body contouring. Patients were given local anesthesia (standardized tumescent solutions) during all three phases of the surgery. During the latter two phases, irrigation of tumescent solution was accompanied simultaneously by suction aspiration. Fat harvesting was accomplished by collecting and separating the aspirated adipose tissue in a sterile container, without need for washing or centrifugation. Fat grafting by microdroplet technique was performed within two hours of collection. Fat aliquots from five randomly-selected patients were assessed with a trypan blue dye exclusion test within one hour and again six to eight hours after collection.

RESULTS:

A total of 37 females and four males underwent WAL in this series; average body mass index (BMI) was 25.5. Among the 41 patients, 166 areas involving twelve anatomic sites were treated. Patients were divided into two groups based on the volume of treatment: Group 1 contained 19 patients with small-volume WAL and Group 2 had 22 cases of moderate-volume WAL. All patients experienced uneventful recovery periods with minimal side effects and no significant complications. Although large volumes of tumescent solution were required during the three phases of the technique, the total volume of infiltration almost equaled the final volume of aspiration. The average infiltration-to-aspiration ratio was 1.1 to 1.0 in all cases over both groups. On the other hand, the average infiltration-to-fat ratio was 2.8 to 1.0 in Group 1 and 2.4 to 1.0 in Group 2. Lidocaine dosage averaged 10.5mg/kg in Group 1 and 20.0mg/kg in Group 2. Patients were monitored for at least 24 hours without adverse signs or symptoms that required fluid resuscitation, blood transfusions, or interventional treatments for lidocaine side effects or toxicity. Twenty-three patients elected to save their fat for autologous fat grafting in nine anatomical sites with thirty-nine procedures. The augmented sites were clinically assessed between three and eight months postoperatively. Trypan blue dye exclusion testing indicated that about 90% of adipocytes expelled the dye after one hour of

extraction, while an estimated 10% of cells per patient were observed to be free of dye six to eight hours after removal.

CONCLUSIONS:

The amount of instilled tumescent fluid, lidocaine dosage, and aspiration volumes appeared to be safe, with minimal blood loss in small and moderate volume liposuction cases. The early experience with fat grafting was encouraging, but requires more sophisticated evaluation, longer follow-up, and a larger number of cases.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/?term=Water-Assisted+Liposuction+for+Body+Contouring+and+Lipoharvesting+-+Safety+and+Efficacy+in+41+Consecutive+Patients>