Liposuction for the Treatment of Lymphedema?

Various surgical procedures for the treatment of lymphedema have been practiced for over a century and advancements in medical technologies have led to increased discussion of the role surgical treatment as an alternative or additional treatment option for a select group of patients affected by lymphedema. Recent research indicates that the surgical approach to treat lymphedema has beneficial effects for some patients; however, there is a broad consensus that surgical procedures do not eliminate the need of complete decongestive therapy (CDT) pre- as well as post-operatively (1, 2), and should act as an adjunct to conservative treatment protocols.

Any surgical approach to treat lymphedema should be reserved for those cases when conservative treatments have clearly been unsuccessful or when the achieved success of conservative measures can no longer be maintained (4). Other cases where surgery may be a consideration are situations when limb weight contributes to considerable functional impairment and cosmetic deformity, and the occurrence of frequent lymphedema-associated inflammatory attacks.

An important component to determine whether any surgical procedure for lymphedema is indicated is to weigh the potential benefit of the specific surgical procedure against the risks associated with it. Other considerations should include the individual medical needs and goals of the patient, and the medical expertise of the surgical team (5).

In general, surgical approaches can be classified as excisional techniques, reconstructive techniques, and tissue transfer procedures.

This article covers liposuction for the treatment of lymphedema.

Liposuction is an excisional procedure during which fatty tissue under the skin is removed by a vacuum tube, which is inserted repeatedly via several incisions made to the areas affected by lymphedema. Not only fatty tissue is removed during this invasive procedure, but also lymph vessels embedded in the fatty tissue. Liposuction procedures in the treatment of lymphedema are different from standard cosmetic liposuction, which is not suitable in the treatment of lymphedema. Liposuction for lymphedema should not be attempted by surgeons not trained in this procedure. Other terms to describe this technique include suction assisted lipectomy (SAL), circumferential suction assisted lipectomy (CSAL) and suction assisted protein lipectomy (SAPL).
Liposuction is presently the most common surgical excisional procedure for the treatment of lymphedema. As with other surgical approaches, liposuction should be reserved for those patients where conservative treatments have shown to be unsuccessful to bring the lymphedema back to a stage of latency. It should be limited to cases of non-pitting lymphedema, where the excess limb volume is comprised of adipose tissue, which is often the case in late stage lymphedema. Some clinicians however report that pitting edema around 4-5 millimeters in upper extremity lymphedema, and 6-8 millimeters of pitting in lower extremity lymphedema can be

accepted for liposuction if further reduction by means of conservative measures is not possible (7).
Literature indicates that large amounts of excess volume can be removed successfully in a limited number of patients when performed correctly, and the incidence of cellulitis can be reduced of up to 75% (8).
The risks of liposuction include bleeding, infection and abnormal sensation in the skin. Lymphedema can still recur following liposuction, and patients who underwent this procedure are required to continue lifelong wearing of progressively smaller custom-fitted compression garments. Successful treatment outcome depends largely on a close cooperation between the surgeon and a lymphedema therapist with specific experience with this procedure pre- and post-operatively.

It must be stressed that all surgical procedures are invasive, costly, involve significant risks, and the long-term results are not yet known. Conservative management of lymphedema with complete decongestive therapy is noninvasive, with minimal to no side effects for patients, shows excellent long-term results, and should always be the treatment of choice. CDT is considered the gold standard treatment for lymphedema and with properly applied treatment techniques and patient compliance is able to successfully manage lymphedema in the majority of patients (3).

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