

From Lymph to Fat – Lessons Learned During 25 Years of Complete Reduction of Lymphedema

Professor Hakan Brorson MD PhD, Tobias Karlsson, MD PhD-student, Karin Ohlin OT, Barbro Svensson PT LT

Department of Clinical Sciences, Lund University, Malmö, Sweden, Plastic and Reconstructive Surgery, Skåne University Hospital, Malmö, Sweden

INTRODUCTION:

Patients with chronic non-pitting lymphedema do not respond to conservative treatment because of early deposition of excess adipose tissue due to chronic inflammation. Microsurgical reconstructions, in contrast to liposuction, cannot provide complete reduction. To remove the excess adipose seems thus to be a logical treatment strategy. This prospective study describes the long-term outcome of liposuction of arm and leg lymphedema.

METHODS:

190 women with arm and 126 patients with leg edema underwent liposuction followed by compression with garments.

RESULTS:

Arms: Preoperative mean excess volume was 1411 ± 52 mL. Postoperative mean reduction was $104 \pm 2.0\%$ at 3 months and $116 \pm 2.1\%$ at 1 year, and more than 100% during 25 years' follow-up. Legs: Preoperative excess volume was 3489 ± 155 mL. Postoperative mean reduction was $82 \pm 2.4\%$ at 3 months and $101 \pm 2.2\%$ at 1 year, and more than 100% during 15 years' follow-up. A slight overcorrection was seen in both groups.

CONCLUSION:

Liposuction is an effective method for treatment of chronic, non-pitting arm lymphedema with long-lasting results. Removing the hypertrophied adipose tissue is a prerequisite to achieve complete reduction.