

Surgical Treatments in Lymphedema

Boccardo F, MD, PhD, FACS

Chief of Surgical Lymphology Unit – Department of Cardio-Thoracic and Vascular Surgery
San Martino Hospital, Genoa – University of Genoa, Italy

francesco.boccardo@unige.it

Different surgical techniques are nowadays proposed for the treatment of lymphedema. Most of them are reconstructive microsurgical techniques and some of them are debulking, modernly performed through mininvasive procedures. There is still not a consensus on which are the specific indications for each technique, how to evaluate results, pros and cons. The aim is to give an outline of the state of the art of the surgical treatment of lymphedema.

Various review articles and published clinical experiences from different groups of surgeons devoted to lymphatic surgery report about the usefulness of lymphatic reconstructive microsurgery in early stages, where there are less fibrotic tissue and lymphatic changes. It is much more difficult to find good lymphatics in more advanced stages, because of the severe sclerotic changes of the tissues and the aponeurotic fasciae, even though searching for both superficial and deep lymphatic collectors, actually a few number of lymphatic vessels may be found. It is mandatory to perform a proper preoperative diagnostic assessment through superficial and deep lymphoscintigraphy and echo-duplex venous scan. Lymphangio-MR is used in the most advanced stages to study the morphology of lymphatic drainage. ICG lymphangiography is used peroperatively together with the blue dye (BPV) to find sound lymphatic collectors during surgery. Results are evaluated by clinical assessment and lymphoscintigraphy. Minimally performed debulking techniques are used in the most advanced cases to reduce the fibrotic tissue after CDP plus microsurgery. Finally, microsurgical reconstructive techniques are used to prevent secondary lymphedema by performing lymphatic-venous anastomoses at the time of lymph nodal dissection (LYMPHA technique).

The best results are obtained by microsurgery in the earlier stages and in secondary lymphedemas in terms of reduction of lymphangites, and less necessity of postoperative physical treatment and elastic garments. Microsurgery may be of great help also in late stages which may however need proper postoperative treatment to improve the outcome. Excellent results are obtained by LYMPHA technique in the prevention of secondary lymphedema following axillary and groin lymph nodal dissections.

The role of surgery in lymphedema treatment is of utmost importance mainly for secondary lymphedemas and obstructive primary ones. The meaning of microsurgical techniques is to open the tap and allow the lymph to pass through a lymphatic-venous by-pass.

Francesco Boccardo, MD, PhD, FACS

President of the European Society of Lymphology. Associate Professor of General Surgery. Chief of the Unit of Surgical Lymphology by the Cardio-Thoracic, Vascular and Endovascular Surgery Department, University Hospital San Martino, Genoa, Italy. Clinical activity in Surgical Lymphology: diagnosis, treatment and prevention of lymphedema, lymphatic malformations and chylous disorders. Inventor of the original technique LYMPHA, for the prevention of secondary lymphedema. Author and co-author of over 250 scientific publications and of Chapters for 25 textbooks on General Surgery and Vascular Surgery. Invited speaker, President and Chairman of over 200 national and international congresses.