



THE LATISSIMUS DORSI & RECTUS FLAP

László Agócs

*National Inst. of Oncology, National Korányi Inst. of Pulmonology, Semmelweis University
Thoracic Surgery Department, Budapest, HUNGARY*

Background

The management of bronchopleural fistulas (BPF), extended resections, inflammations, chest wall reconstruction, or esophageal perforations pose unique challenges for thoracic and reconstructive surgeons. Different surgical options have been utilized with no consensus regarding the best treatment modality. Usage of pedicled muscle flaps like latissimus dorsi (LD) and rectus abdominis (RA) may give excellent results even in difficult situations.

Material and Methods

Between 1995 and 2012 a total of 298 patients were referred to the thoracic surgical team. Latissimus dorsi and rectus abdominis muscles were selected for reconstruction or prevention in 117 patients. The latissimus muscle blood supply is via the subscapular artery, a branch of the axillary artery. The muscle is also supplied by perforators from the thoracic intercostal and lumbar arteries that allow it to be used as a pedicled flap that can cover posterior defects and has the possibility to use as a free flap. The rectus abdominis muscle has two main sources of arterial blood supply. The two main blood supplies are the inferior and the superior epigastric arteries. These flaps were used as pedicled transposition flaps.

Results

Latissimus dorsi flap was used in 62 cases preventively, and in 50 cases treated with either open window thoracostomy (OWT), or chest wall reconstruction, BPF, or esophageal perforation. A total of 298 flaps were used. Partial or total flap loss was identified in 14 flaps (4,7%). Rectus abdominis muscle flap reconstruction was successful in 5 patients, in 3 cases of costochondritis, in 1 case of BPF and in 1 case of a draining sinus were to be treated with a flap which is well vascularized and can be easily prepared with minimal donor site morbidity.

Conclusion

The use of transposed pedicled latissimus dorsi muscle flap effectively prevents BPF and highly advised for chest wall reconstruction. The pedicled rectus abdominis flap is a perfect choice for treating costochondritis. Authors recommend their routine use in first-time and selected reoperative cases in patients who are undergoing high-risk lung resection or other serious surgical aspects and also consider the excellent outcomes and low morbidity and flap- loss rate even in high-risk patients to be very encouraging.

Keywords: latissimus dorsi, rectus abdominis, muscle flaps, reconstruction, prevention, thoracic surgery