

POSTER PRESENTATION

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The laparoscopically harvested omental flap and transverse plate fixation for sternal reconstruction in complicated sternal wound infection after cardiac surgery

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From 23rd World Congress of the World Society of Cardio-Thoracic Surgeons
Split, Croatia. 12-15 September 2013

Background

Complicated sternal wound infection after cardiac surgery has an incidence of 0.4 – 6.9 % and mortality of 7 – 80 %. The ideal reconstructive procedure is still a matter of debate.

Aim

To report our experience with the laparoscopically harvested omental flap and transverse plate fixation for sternal reconstruction after complicated sternal wound infection.

Methods

Between 2010 and 2011, 6 patients with type IV deep sternal wound infection underwent a sternal reconstruction with a laparoscopically harvested omental flap and transverse plate fixation. The median age of the cohort (1 female and 5 males), was 72.5 years (range: 49-78 years). In 5 patients, a bilateral internal thoracic artery had been used. Considerable preoperative risk factors were present: Obesity with Body Mass Index (BMI) ≥ 33 (range: 33 – 35: 3 patients); chronic obstructive pulmonary disease (COPD) without steroid therapy preoperatively (4 patients); Diabetes mellitus (type 1: 2 patients; type 2: 1 patient). Abdominal surgery had previously been performed in 4 patients. In 5 cases, the mediastinal wound was prepared with negative pressure wound therapy following surgical debridement. An internal fixation of the sternum was made by titanium locking plates with

sternal and rib-to-rib fixation. The postoperative course of these patients was followed by clinical follow-up.

Results

Early postoperative sternal stability was seen in all 6 patients. The 30-day perioperative mortality rate was zero, with an overall survival of 100% until today. Postoperatively no superficial or deep surgical site infections (SSI) were appreciated. Follow-up ranged from 24 to 41 months (median: 28 months).

Conclusions

Combination of a laparoscopically harvested omental flap and transverse plate fixation can contribute to a successful outcome following complicated sternal wound Infection and deserves serious consideration, regardless of the co-morbidity or previous abdominal surgery.

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Published: 11 September 2013

doi:10.1186/1749-8090-8-S1-P58

Cite this article as: De Raet and Sergeant: The laparoscopically harvested omental flap and transverse plate fixation for sternal reconstruction in complicated sternal wound infection after cardiac surgery. *Journal of Cardiothoracic Surgery* 2013 **8**(Suppl 1):P58.

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