

Audit of 37 cases of deep sternal wound infections (DSWIs) following 2418 coronary artery bypass graftings (CABGs)

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Abstract

Aim The purpose of this paper is to study the incidence of deep sternal wound infections (DSWIs) after median sternotomy, its correlation to demographic data, diabetes mellitus (DM), choice of vessels used for coronary artery bypass grafting (CABG), microbiological wound status, and outcome of surgical management in terms of complete wound healing, postoperative stay, and mortality.

Methods A total of 2418 patients who underwent CABG through median sternotomy from January 2005 to December 2013 were included in the study. DSWI was found in 37 patients. Logistic regression, Fisher's exact test, and chi-squared test were used to find association, and a *p* value of <0.05 was considered as significant.

Results Incidence of DSWI in our study is 1.53 %. In the whole population, M: F ratio was 5:1. Commonest age group of DSWI was 61 to 70 years. Out of 2418 patients, 1035 patients were diabetic, of which 31 (3 %) developed DSWI (*p* value 0.001).

Out of these, in 1034 patients, bilateral internal mammary arteries (BIMAs) were used and 30 (2.9 %) patients developed DSWI (*p* value 0.030). Postoperative stays were longer for patients with multiple organisms in their culture (*p* value 0.029). Pectoralis muscle flaps were done in 30 patients, omentum with pectoralis in 2 patients, and simple suturing in 1 patient. Median hospital stay after definitive wound closure was 8 days. Wound healing was achieved in 79 % patients at the end of 2 weeks. Mortality after definitive wound closure was 6.06 %.

Conclusions DM is independent risk factor for DSWI. Use of BIMA in patients with DM increases the risk of DSWI. Aggressive wound debridement and early closure is associated with low mortality and shorter hospital stay.

Keywords Deep sternal wound infection · Median sternotomy · Coronary artery bypass grafting

Introduction

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