

Impact of endoscopic versus open saphenous vein harvest techniques on outcomes after coronary artery bypass grafting

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Background: Endoscopic saphenous vein harvest (EVH) decreases leg wound infections and improves cosmesis after coronary artery bypass grafting (CABG). Recent data, however, suggest that EVH may be associated with reduced graft patency rates. The objective of this study is to assess the effect of EVH on short-term and midterm outcomes after CABG.

Methods: Data were prospectively collected on all first-time isolated CABG and combined valve/CABG with saphenous vein graft between 1998 and 2007 at a single center. Patients having traditional “open” vein harvest (OVH) were compared with patients having EVH. Multivariate models were used to examine the risk-adjusted impact of EVH on postoperative leg infection, composite in-hospital adverse events, and individual and composite midterm adverse events.

Results: The study included 5,825 patients, of whom 2,004 (34.4%) had EVH. Patients having EVH were more likely to have ejection fraction less than

50% (32.0% versus 29.3%, $p=0.04$), recent myocardial infarction (24.2% versus 18.3%, $p<0.0001$), and left main disease (26.0% versus 22.1%, $p=0.0009$). Median follow-up was 2.6 years. After risk adjustment, EVH was associated with reduced rates of leg infection (odds ratio 0.48, $p=0.003$) but had no association with either in-hospital (odds ratio 0.93, $p=0.56$) or midterm adverse outcomes (hazard ratio 0.93, $p=0.22$). Endoscopic saphenous vein harvest was associated with reduced readmission to hospital for unstable angina (odds ratio 0.74, $p=0.01$).

Conclusion: Endoscopic saphenous vein harvest is associated with a lower rate of leg infection and is not an independent predictor of in-hospital or midterm adverse outcomes. Endoscopic saphenous vein harvest is a safe alternative to OVH for patients undergoing CABG with saphenous vein.

Annals of Thoracic Surgery. 2010;89:403–408.

Comment in:

Annals of Thoracic Surgery. 2010;89:408–409.

Annals of Thoracic Surgery. 2010;90:1743–1744; author reply 1744.

Annals of Thoracic Surgery. 2010;90:1743; author reply 1743.

Annals of Thoracic Surgery. 2010;90:1059; author reply 1059–1060.