

Clinical benefits of endoscopic vein harvesting in patients with risk factors for saphenectomy wound infections undergoing coronary artery bypass grafting

Carpino PA, Khabbaz KR, Bojar RM, Rastegar H, Warner KG, Murphy RE, Payne DD

Division of Cardiothoracic Surgery,
New England Medical Center, Tufts
University School of Medicine, Boston,
Massachusetts, USA

Objective: The influence of endoscopic harvesting techniques on the prevalence of leg-wound complications after coronary artery bypass grafting remains to be defined for patients at high risk for the development of wound infections.

Methods: Among 1473 patients undergoing coronary artery bypass grafting who had the saphenous vein harvested by either a continuous incision or skip incisions leaving intact skin bridges, Carpino et al determined the prevalence of wound infections to be 9.6%. The following variables were entered into logistic regression analysis to identify significant risk factors that might be predictive of wound infection: diabetes, peripheral vascular disease, obesity, renal failure, steroid use, age, sex, and type of closure. The authors then prospectively randomized 132 patients found to be at high risk of wound

infection to either endoscopic vein harvesting or a continuous open incision.

Results: Univariate analysis showed female sex ($p = .04$), diabetes ($p < .001$), and obesity ($p < .001$) to be predictors of wound infection. In a multivariate model diabetes ($p = .02$) and obesity ($p = .001$) were independent predictors. In patients at high risk, the prevalence of wound infection was 4.5% for the endoscopic group versus 20% for the open group ($p = .01$). Vein procurement time was greater in the endoscopic group (65 minutes versus 32 minutes, $p < .001$), as was the number of vein repairs required (2.5 versus 0.6, $p < .001$).

Conclusion: The use of endoscopic vein harvesting decreases the prevalence of postoperative leg-wound infections in high-risk patients with diabetes and obesity. Whether this translates into an economic benefit that justifies the additional cost of that technology requires further analysis.

Journal of Thoracic and Cardiovascular Surgery.
2000;119:69–76.