

A prospective randomized trial of endoscopic versus conventional harvesting of the saphenous vein in coronary artery bypass surgery

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Objectives: Our objectives were (1) to determine whether minimally invasive endoscopic harvesting of the saphenous vein reduces morbidity due to postoperative wound infection and pain with improved cosmetic results and mobilization as compared with the conventional technique and (2) to compare the histologic properties of the saphenous veins harvested conventionally and endoscopically.

Methods: One hundred forty-four patients undergoing coronary artery bypass grafting were randomized to have vein harvesting performed by either the conventional (n = 72) or an endoscopic (n = 72) minimally invasive technique.

Results: Vein harvest time (open leg wound time) was significantly reduced in the endoscopic group (27.6 versus 64.4 minutes; $P < .0001$). The rate of leg wound infection was significantly reduced in the endoscopic group (4.3%) as compared with the conventional

group (24.6%), a relative risk reduction of 83% (95% confidence interval: 36%-129%; $P = .0006$). The majority of infections (84.2%) occurred after hospital discharge. Postoperative leg pain, mobilization, and overall patient satisfaction were also significantly improved in the endoscopic group. Double blinded histologic assessment of harvested vein (n = 28) showed no evidence of any clinically important significant damage to the specimens in either group.

Conclusion: In this prospective randomized trial, endoscopic harvesting of the saphenous vein significantly reduced postoperative leg wound complications, including infection, and improved patient satisfaction as compared with the conventional harvesting technique. There were no significant histologic differences between the conventional and endoscopically harvested saphenous veins.

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