

Minimally Invasive Endoscopic Vein Harvest Technique (EVH) for Coronary Artery Bypass Graft Surgery

The number of coronary artery disease in Hong Kong is rising because of the increasing prevalence of diabetes mellitus, obesity and hypertension. Coronary artery bypass graft surgery (CABG) is one of its treatments which collect the great saphenous vein in patient's leg for graft conduit used. However, the traditional open technique in harvesting the great saphenous vein (OVH) may cause leg wound complications and Chinese CABG population with diabetes mellitus (around 40%) have higher leg wound infection rate. A study on the effectiveness of the Endoscopic Vein Harvest technique (EVH) for Chinese CABG patients done by a research team from Department of Surgery, HKU LKS Faculty of Medicine, which shows that EVH is an effective technique to harvest great saphenous vein for CABG surgery with significantly fewer leg wound complications.

The EVH requires special instruments to create only 3 to 4 small skin incisions of about 2 cm long each. The dissection of the great saphenous vein will be carried out inside the subcutaneous tunnel under direct videoscopic imaging. Between March 2005 and Jan 2006, 74 patients who underwent CABG surgery performed at the Grantham Hospital were randomized into EVH and OVH groups. Patients with severe obesity, bilateral leg varicose veins and history of deep vein thrombosis were excluded. Analysis on leg wound complications, post-operative pain, patient satisfaction and clinical outcomes were satisfied.

EVH can be introduced to all suitable CABG patients at the Grantham Hospital in future and may be applied to harvest the radial artery in the arm for the CABG surgery.