A retrospective audit of long-term lower limb complications following leg vein harvesting for coronary artery bypass grafting

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We would like to congratulate Dr Garland and colleagues for their important and honest paper concerning the incidence of lower limb complications following leg vein harvesting for coronary artery bypass grafting (CABG) [1]. They have described clearly the high incidence of wound infections, numbness, pain and unilateral leg swelling after conventional vein harvesting for CABG. In addition, the authors could not confirm the previously reported association to risk factors by other groups, such as diabetes or peripheral vascular disease. Garland et al. [1] also point to the fact that most of the wound infections occur following hospital discharge and are associated with a high rate of postoperative antibiotic use. The rate of wound infection after vein harvesting is even higher in patients with vascular operations (17–44%) [2].

Even though arterial conduits are increasingly used, at least one vein is still harvested in the majority of CABG procedures worldwide. Given the good short- and long-term results of surgical revascularization for patients with coronary artery disease, problems at the leg vein harvesting site are often the major complaint of the patients after these procedures. Major efforts are being undertaken to reduce the size of the chest incision (half sternotomy, lateral thoracotomy, usage of ports), even though the complication rate from a sternal incision is relatively low. Therefore, every effort should be undertaken to reduce the complications from the conventional vein harvesting procedures, which are described by Garland et al. [1].

With the current availability of the minimally invasive, endoscopic vein harvesting procedure, a solution to this postoperative complication seems to be realistic. The authors have pointed to this technique in their report and have also listed potential drawbacks of this method, such as increased harvest time, additional expense and potential for vein trauma [1]. Our group [3,4] as well as many others have shown the significant advantages of this technique as compared to the conventional procedure in terms of wound infections, neuropathy, pain, swelling as well as patient comfort and satisfaction. We are using this method for 7 years and this has resulted in an almost complete disappearance of any leg wound complications. Currently all veins in all patients are harvested with this method with a very low rate of contraindications. Our group has developed a non-disposable, minimal-invasive, endoscopic harvesting system (Vein harvesting system Freiburg, Storz Co., Tuttingen, Germany) which needs only one 3–4 cm, horizontal skin incision medially above the knee for harvesting the entire saphenous vein from the ankle to the groin. Harvest time is no longer prolonged as compared to the conventional method and is sometimes even faster. The learning curve is approximately 2 months and this method is now performed by all surgical assistants after their 2nd or 3rd year of training. The costs are reduced to the one-time purchase of the endoscopic system. The vein harvesting system is non-disposable. The potential for endothelial trauma has been addressed by us as well as by others [5]. There has been no report of any additional damage to the vein endothelium as compared to the conventional technique.

In summary, minimally-invasive endoscopic vein harvesting is able to reduce significantly the well known and by Garland et al. reported complications of vein harvesting and should be used routinely. Garland and co-workers are to be congratulated for their study and for emphasizing again the importance of this aspect of CABG.

References


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