

Long-term physical activity and neurologic function after harvesting of the radial artery as T-graft or free graft in coronary revascularization.

Knobloch K, Lichtenberg A, Tomaszek S, Hagl C, Khaladj N, Klima U, Haverich A.

Department of Thoracic and Cardiovascular Surgery, Hannover Medical School, Hannover, Germany. kknobi@yahoo.com

BACKGROUND: Radial artery grafts in coronary revascularization are frequently used, either as a T-graft or as a free radial graft such as a saphenous venous graft. Besides the neurologic function of the hand after radial artery harvesting, which is questioned especially in the long-term perspective, no data on patients' lifestyle are available in this special cohort. Therefore we focused on both the patients' neurologic function as well as level of physical activity, along with their body mass index and smoking habits in this prospective, long-term study. **METHODS:** Two hundred eleven patients (187 males; 64 +/- 8 years; mean Canadian coronary scale, 2.4 +/- 0.7; ejection fraction, 59 +/- 15%) were enrolled and scheduled for elective radial artery harvesting in an open conventional technique. Follow-up of 26 +/- 5 months (range, 13 to 37 months) was performed by a direct telephone interview with patients, which was 100% complete. The majority of radial arteries were used in the T-graft technique (73.9%), 24.2% were used as a free graft, and 1.4% as a jump graft. **RESULTS:** One hundred sixty-five patients (78.2%) did not complain of any neurologic deficit at all. Numbness was distributed among the thumb (5.2%), the wrist (4.3%), and the incision site (3.3%). Hyposensitivity was predominantly at the wrist, followed by the thumb. Pain was distributed at the wrist (1.9%) and the thumb (1.5%). Aggravated sense of cold at the donor hand was evident in 11 patients (5.2%). No patient was compromised in their daily activities, such as piano playing or writing. Subjective well being improved in 147 patients (69.7%), was unchanged in 39 patients (18.5%), and was worse in 11 patients (5.3%) after radial artery harvesting. The mean Canadian coronary scale class improved significantly (1.3 +/- 0.6; $p < 0.05$). There were patients (44.5%) who performed no sports activity after the procedure and patients (11.8%) who performed sports every day of the week. There were patients (80.1%) who did not participate in heart sport groups, with only 27 patients (12.8%) participating in such heart sport groups once a week. One hundred seventy-one patients (81.0%) attended a cardiac rehabilitation program after the procedure. Body mass index did not change at all. There were patients (29%) who stopped smoking as of the procedure, whereas 10% of patients were active smokers 25 months after the procedure. **CONCLUSIONS:** Radial artery harvesting is associated with a minor number of neurologic complications such as numbness and hyposensitivity after a conventional pedicled harvesting technique without any compromise on patients' daily activities. Further emphasis has to be taken in the promotion of lifestyle changes after coronary revascularization. About half of the patients did not perform any regular physical activity 2 years after surgery; mean body mass index did not change; and nearly 10% continued to smoke.

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