Letter to the Editor

Total arterial revascularization, conventional coronary artery bypass surgery, and age cut-off for the loss of benefit from bilateral internal thoracic artery grafting

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We have a concern regarding the report by Mohammadi et al. [1]. In their study 10,954 patients who underwent myocardial revascularization were retrospectively analyzed. Among these 9566 patients received a single internal thoracic artery (ITA) and 1388 patients received a double ITA. Long-term survival and overall impact of ITA use on cardiac-related death were studied. The authors concluded that the survival benefit due to ITA use is lost after the age of 60. What is the true clinical relevance of these results? Since ITA harvesting has been found to increase operation time, postoperative bleeding and sternal wound complications [2], according to the conclusions of this paper, the total arterial revascularization strategy should be discussed for patients between 60 and 65 years, and stopped for the elderly.

We maintain that the following issues should be pointed out. It is unclear how many y- or t-configurations have been used to manage ITA and how RITA graft (inflow from subclavian artery or free-graft from aorta) has been managed. Additionally, it would be interesting to know if the radial artery has been used and how this graft has been managed.

Furthermore we would like to add personal considerations to explain our surgical strategy on elderly patients. A shift from saphenous vein grafts to ITA occurred more than two decades ago. Recently, several studies suggested that multiple ITA grafts might provide an excellent graft patency and fewer incidences of late cardiac events [3–5].

We analyzed our population undergoing BITA plus radial artery revascularization (01/01/2004–30/06/2008). It is composed of 140 patients (mean age 66.9.3) who received a BITA grafting (BITA are skeletonized without injury to pleural space); among these, 60 patients received an additional arterial graft (radial artery; 30% endoscopic harvesting). The majority (94%) underwent composite y-grafting (sequential grafting in 16%). Never has the arterial graft been anastomosed to the ascending aorta. Respectively, 18% of patients were suffering from COPD, 9% insulin dependent and 25% tablets dependent diabetes, 23.3% had impaired ejection-fraction (EF < 50%), 25% had peripheral-vascular-disease, 28% had cerebro-vascular-disease, and finally 24% were on NYHA-class III–IV. Four patients died (2.8%), 4.5% needed a sternal rewiring, 0.7% suffered from stroke, 3% underwent surgical-revision for bleeding, and finally 1.5% needed a thoracotomy. Median Tni value was 3.57 ng/dl (0.02–190). At 4-year follow-up by internal institute analysis we concluded that the total arterial revascularization-technique (TAR) when compared to conventional-CABG, also in the elderly, guarantees a greater in-hospital and short-term satisfaction, as well as a long-term survival and freedom from recurrent angina and related need for re-revascularization. Besides all that, we speculate that the TAR y-grafting technique should be the preferred method for cardiac revascularization also in older patients, offering the most physiological myocardial-flow (lower TnI value). The possibility to avoid side clamping of the aorta reducing peripheral and cerebral embolization, is absolutely important for patients with aortic sclerosis and/or diabetes. Additionally, such a procedure offers a faster patient rehabilitation avoiding the most problematic healing of leg-wounds typical for diabetic patients. Finally, the endoscopic radial artery harvesting favors further qualitative and esthetic advantages (better and faster healing of arm wounds).

References


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Does tricuspid valve pathophysiology affect outcome in patients having tricuspid valve interventions?

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We read the article by Guenther et al. [1] named ’Tricuspid valve surgery: a thirty-year assessment of early and late...