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Editorial

Should Radial Access Be the Approach of Choice for Elderly Patients?

Victar Hsieh, Sanjit S. Jolly

Randomised clinical trials of radial versus femoral access support the concept that radial access should be the preferred access route. The RadIal Vs. femorAL clinical trial (RIVAL) (n = 7,021), which was recently published, demonstrated that radial access and femoral access presented similar rates regarding the combined primary outcome of death, myocardial infarction, stroke, or severe bleeding within 30 days. However, radial access was associated with a reduction of over 60% of severe vascular complications (1.4% vs. 3.7%, risk ratio [RR] of 0.37, 95% confidence interval [95% CI] 0.27-0.52; P < 0.0001). In the subgroup of centres with more experience in radial access and ST segment elevation myocardial infarction (STEMI), a radial access benefit was observed for the primary outcome.[1]

See page 16

ELDERLY PATIENTS

The number of elderly patients undergoing percutaneous coronary intervention (PCI) has increased over the last few decades. Studies have demonstrated that old age is a significant predictor of failure in procedures performed using the radial route and that it is associated with a greater need for conversion to an alternate access route.[2] In elderly patients, there is a greater incidence of tortuousness in the radial artery and in the brachiocephalic trunk.[3] However, old age is a significant risk factor for severe bleeding and vascular complications related to the procedure.[4,5] Although access through the radial artery is an attractive approach for PCI in elderly patients, due to its potential to reduce vascular complications and therefore to reduce bleeding, the technical challenges typically encountered using the radial approach and the potentially reduced rate of success of the procedure in these patients may discourage interventionists from using it in this scenario.

CLINICAL SCENARIO

In an 88-year-old male patient with STEMI who was referred for primary PCI, should the standard approach of interventionists be the radial or femoral route?

A study published by Andrade et al.[6] in this issue of the ***Revista Brasileira de Cardiologia Invasiva*** reports the evolution of 635 patients older than 60 years of age who underwent PCI through the radial route. We must highlight that 50% of this population presented acute coronary syndromes without ST segment elevation and that 22% of the population presented STEMI.

The angiographic success rate was 96.8%, and the rate of conversion to the femoral route was 2.8%, suggesting that these surgeons are highly qualified for performing radial access. The severe bleeding rate was very low (0.8%), with a 1.6% rate of haematoma occurrence.

We should stress that these authors did not find a significant difference in the conversion rate between patients aged between 60 and 74 years and ≥ 75 years (2.3% vs. 4.2%, respectively). Additionally, no significant difference was observed in the rate of conversion between women and men over 60 years of age (3.9% vs. 2.1%, respectively). However, the study may not have had enough power to detect differences in the conversion rates between these groups.

The limitations of their analysis include the lack of a control group with femoral access and the observational nature of the study. However, a randomised study performed in 377 patients older than 80 years of age that compared the radial and femoral access routes demonstrated a reduction of vascular complications with the radial route (1.6% vs. 6.5%, respectively; P = 0.03) and a discrete increase in the fluoroscopy time (6 ± 4.4 minutes vs. 4.5 ± 3.7 minutes, respectively). The angiographic success rates of the procedure were similar.[7]

Interventional Cardiology – Hamilton Health Sciences – McMaster University – Hamilton, Canada.
Correspondence to: Sanjit S. Jolly. Interventional Cardiology – Hamilton Health Sciences/General Division – DBCVSRI Building Rm C3-118 – 237 Barton Street East – Hamilton, Canada – L8L 2X2
E-mail: sanjit.jolly@phri.ca
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Therefore, in elderly patients, radial access prevents more severe vascular complications and has a success rate similar to femoral access, despite the technical challenges that exist in this population. For experienced surgeons, we believe that the radial route should be the standard approach in elderly patients.

CONFLICTS OF INTEREST

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