OUT OF SIGHT, OUT OF MIND

Reply to the Editor:

With regard to the letter in which Mounsey and colleagues¹ raise the issue of the potential impact of transradial catheterization (TRC) on the outcomes of radial artery (RA) grafts, we agree heartily that this a matter to which more attention should be paid, both now and in the future. Although the main point of the letter is that TRC rates should be reported in arterial grafting outcomes studies, this is more than an academic question.

To provide some historical and international perspective, TRC was first reported in 1989 by Campeau.² For reasons of patient satisfaction and decreases in complications, cost, and mortality, TRC has been encouraged as the access site of first choice³ and is, in fact, a recommendation for the study of acute coronary syndromes other than ST-elevation myocardial infarction in the European Society of Cardiology guidelines.⁴ Because TRC rates are higher in academic training centers than in community hospitals and in Europe than in the United States, a practicing community US surgeon may not be privy to the relevance of TRC in the referenced study by Benedetto and coworkers.⁵ In the United States, the proportion of TRC as a percentage of total coronary angiographies and interventions has increased from 2% in 2007 to a current rate of 36% (Figure 1).⁶ In the United Kingdom, the TRC rate for patients younger than 60 years was 65.6% in 2012, up from 17.5% in 2006. Notably, the rate was lower

for elderly patients, at 54.5% for those at least 80 years old.⁷

Having identified that, by the numbers, the period and population of Benedetto and coworkers' study⁵ fall under the scope of TRC, one needs to ask about the evidence for the impact on long-term RA graft patency. Here, the data are more limited. Mounsey and associates⁸ have previously outlined the morphologic and functional impact of TRC on the RA; however, outcomes data are severely lacking in quantity. The 2 retrospective studies cited in the letter of Mounsey and colleagues¹ have a combined cohort of studied RA grafts with previous TRC of 49. Further, these studies were from Japan and the United States. Thus, there is an opportunity to gain from reporting on TRC in the study of Benedetto and coworkers, which would provide much greater power and historical experience in determining whether TRC affects the longevity of RA grafts.

In tandem with improving reporting on clinical outcomes, the rising incidence of TRC should prompt a review of clinical practices. Cardiac catheterization may be just one of the early steps in a patient's course, and if revascularization is required, decisions made at the early stage have downstream impact. The evolution of the heart team approach to valvular disease has been applied to coronary revascularization care as well. The emphasis has been on integration at the stage of treatment plans and decisions; however, diagnostic testing choices generally remain in the traditional silo structure. Depending on the evolving data on outcomes with RA grafts after TRC, it may behoove surgeons to become more involved with the discussion of the direction of TRC.

FIGURE 1. Rates of transradial catheterization (TRC) in the United States as a percentage of total coronary angiographies and interventions reported by the National Cardiovascular Data Registry (NCDR). Reprinted with permission.⁶

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HANDS OFF, THE RADIAL ARTERY IS MINE!

Reply to the Editor:

Mounsey and Taggart make an excellent point in addressing the worse results of radial artery (RA) "grafts after previous transradial catheterization (TRC). There is now ample evidence (including from our group) that TRC causes extensive damage to the vascular wall and profoundly affects the RA vasoreactivity.^{1,2} At present, it is unclear when or even if the morphologic and functional properties of RA grafts return to baseline after TRC, with some studies showing

persistent endothelial damage several months after the endovascular procedure.¹ In addition to this, as nicely summarized by the Mounsey and Taggart's own group in a recent review article,³ the few observational series that have looked at the angiographic outcome of RA grafts after TRC have reported suboptimal early and midterm patency rates.

In our recent publication quoted by Mounsey and Taggart, as well as in our meta-analysis on the comparison between the RA and the right internal thoracic artery,⁴ we have no information on previous TRC. Because of its recent introduction and slow diffusion in the cardiology community, it is likely that most of the coronary angiographies were performed transfemorally, especially in the initial part of the study period; however, the hypothesis that the inferior results of RA grafts are related to the high attrition rate of RA grafts used for TRC cannot be excluded.

Mounsey and Taggart are to be commended for pointing out an issue of major relevance for the cardiovascular community. There is a growing amount of evidence in favor of both the use of TRC for coronary angiography⁵ and of RA grafts for coronary artery bypass grafting.⁶ The decision of which approach to use for diagnostic angiography has major implications for the future management of patients with coronary artery disease and should be part of the heart team discussion.

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