We read with interest the article by Brasselet et al.1 comparing operator radiation exposure with different vascular access sites, namely radial vs. femoral access, during the performance of coronary angiograms or other percutaneous coronary interventions (PCI). This important concern merits attention, and has been debated extensively over the last few years. As mentioned by the authors, specific attention to the use of protection devices is critical in this field, as well as the specific training of interventionalists with respect to radioprotection, with optimization of projections and careful attention to the distance between the X-ray tube and the patient. The most important methodological issues with the present study are the non-randomized design and the high probability that most of the operators likely were amidst their learning curve. Indeed, after 5 years of experience with transradial interventions (TRI), they globally used TRI <60% of the time in their daily practice, at a time when most high volume centres were closer to 90%. Moreover, during the study period (6 months), the average cases per operator for the radial route were between 7 and 12 per month, corresponding to 1.7–3 cases per week per operator, which is a very low rate of TRI, if one truly wishes to master this technique. Considering this major drawback, we are not surprised that this comparison led to the results observed by Brasselet et al., with shorter procedures performed using a conventional femoral route that is more familiar to all the operators. However, this important study indicates that, if only a few patients are explored by means of transradial approach (TRA) (example e.g. in the setting of a contra-indication to femoral access or in a patient at high risk for bleeding), the technique remains challenging for a long time, at least for more than 5 years, as reported by the authors. Another important issue not mentioned by the authors is the side of TRA access used, because the left side is certainly more difficult to manage for radioprotection purposes, relative to right radial access, where operators with adapted cath-lab suites are very close to a conventional femoral route. On one hand, radial access for PCI is more demanding, in terms of the learning curve, and certain specific anatomic variations that are difficult to overcome must be recognized quickly to avoid longer fluoroscopic times that are potentially harmful both for patients and for operators. Some alternative approach, like using the left side or the femoral approach, must be considered in these infrequent scenarios, and we do not recommend that one waste time with specific manoeuvres. On the other hand, given the 80% reduction in vascular access site complications and related major bleeding that have been identified systematically in all randomized studies,2 and given the recently recognized importance of major bleeding in terms of patient outcomes, it is warranted that one considers all strategies capable of reducing major bleeding during PCI, especially with ACS. A similar alarmist observational study recently suggested that radial access can be associated with an increased risk of stroke,3 but this clearly is not the case, considering that similar results were published in the same year relating to a study examining the femoral route4 and by our group.5

We acknowledge that, at this point, nothing less than a randomized study with careful assessment of radiation exposure, both for patient and operators, is necessary, before any strong recommendations can be given.

References

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We agree with him that the non-randomized design of the present registry could represent a major methodological issue of this study. However, as mentioned in the manuscript, the special feature of this registry was that operators were blinded to the collection of data, and its purpose is because it was made on the radioprotection team’s initiative. We therefore believe that this registry reflects the ‘real world’ practices in term of radiation exposure and use of radial route in the setting of using optimized radiation protection devices, in a mild to moderate trans radial volume centre.

Hamon mentioned first that we ‘globally used TRI <60% of time in our daily practice, at a time when most high volume centres...’