

Time for pain: today or tomorrow?

To the Editor,

The use of transradial access for diagnostic and interventional coronary procedures is progressively increasing all around the world and in some countries, particularly in Europe and Asia has become the preferred vascular approach. Many studies have shown the advantage of transradial over transfemoral access in terms of major vascular and bleeding complications. At the same time in some studies it has been demonstrated that radial approach may be associated with artery spasm and consequently with discomfort, for the patient. Few data are available in term of procedural comfort, and the study of Aktürk et al. (1) published in this issue of the Journal is aimed at this specific topic. It is a single center randomized study comparing transfemoral and transradial approach in terms of patient comfort and procedural success and complications during percutaneous coronary procedures. The authors randomized 836 patients either to transfemoral or transradial access: all procedures were performed by two operators with extensive experience in both techniques. Peri-procedural pain was assessed using a visual analog scale (VAS) after the procedures and at 30 days. The results of the study showed a bimodal distribution of VAS scores: patients with lower body mass index and smaller wrist circumference have higher VAS for transradial approach, differently patients with higher body mass index showed higher VAS scores for transfemoral access. The possible reason is probably related to the high rate (21% of cases) of radial spasm in the transradial approach (particularly in smaller patients) and to the increased rate of vascular complications in patients with high body mass index.

The following question arises from the results of this study: should we consider the procedure related pain a good reason to change arterial access and to subject patients to increased bleeding complications? Probably not. Indeed this study further supports the data showed that transfemoral approach is associated with significant increase in vascular and bleeding complications. These complications might be associated with adverse long-term outcome (2) whereas pain discomfort remains a temporary and minor issue. Moreover in this study the evaluation of global procedural patient discomfort is lacking. In a previous study (3) we have shown that transradial access was significantly better tolerated by patients after the procedure in terms of difficulty to eat, to urinate or in terms of discomfort due to prolonged bed rest even if femoral closure devices were employed. All these factors remain important for determining the global procedural comfort.

The important message of this study is that a special attention must be paid by operators in order to avoid or minimize radial artery spasm in patients with low body mass index undergoing transradial approach for percutaneous coronary procedures. Operators should always consider that almost 40% of patients have a radial artery diameter smaller than 6 French outer diameter of the sheath (4) and apply all the possible measures at their disposition to reduce artery spasm and consequently pain. The use of sheathless guiding catheter for PCI (5) with diameter less than 5 French might be an option. In the last 5 years Japanese interventional cardiologists have created the so called "Slender Club" aimed at downsizing and miniaturizing the equipment used for transradial procedures showing the feasibility of transradial procedures even with very small caliber catheters. Finally in patients more prone to spasm the use of a combination of spasmolytic cocktails (6) might be a reasonable option.

Anyway you may suffer, today, from a minor procedural pain in order to avoid a major complication related pain, tomorrow.

Alessandro Sciahbasi
Interventional Cardiology, Emergency Department, Sandro Pertini Hospital, ASL RMB; Rome-Italy

References

1. Aktürk E, Kurtoğlu E, Ermiş N, Açıkgöz N, Yağmur J, Altuntaş MS, et al. Comparison of pain levels of transradial versus transfemoral coronary catheterization: A prospective and randomized study. *Anadolu Kardiyol Derg* 2014; 14: 140-6.
2. Rao SV, O'Grady K, Pieper KS, Granger CB, Newby LK, Van de Werf F, et al. Impact of bleeding severity on clinical outcomes among patients with acute coronary syndromes. *Am J Cardiol* 2005; 96: 1200-6. [\[CrossRef\]](#)
3. Sciahbasi A, Fischetti D, Picciolo A, Patrizi R, Sperduti I, Colonna G, et al. Transradial access compared with femoral puncture closure devices in percutaneous coronary procedures. *Int J Cardiol* 2009; 137: 199-205. [\[CrossRef\]](#)
4. Yoo BS, Yoon J, Ko JY, Kim JY, Lee SH, Hwang SO, et al. Anatomical consideration of the radial artery for transradial coronary procedures: arterial diameter, branching anomaly and vessel tortuosity. *Int J Cardiol* 2005; 101: 412-27. [\[CrossRef\]](#)
5. Sciahbasi A, Mancone M, Cortese B, Pendenza G, Romagnoli E, Fischetti D, et al. Transradial percutaneous coronary interventions using sheathless guiding catheters: a multicenter registry. *J Interv Cardiol* 2011; 24: 407-12. [\[CrossRef\]](#)
6. Kristic I, Lukenda J. Radial artery spasm during transradial coronary procedures. *J Invasive Cardiol* 2011; 23: 527-31.

Address for Correspondence: Dr. Alessandro Sciahbasi, Interventional Cardiology - Sandro Pertini Hospital-ASL RMB; Rome-Italy Phone: +39 06 41433871 Fax: +39 06 41433481 E-mail: alessandro.sciahbasi@fastwebnet.it

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