Indian Heart Journal 73 (2021) 525–526

Contents lists available at ScienceDirect

Indian Heart Journal

journal homepage: www.elsevier.com/locate/ihj

Letter to the Editor

Comment: Comparison of radial versus femoral access using hemostatic devices following percutaneous coronary intervention

Keywords:
Vascular closure devices
Radial access
Femoral access
Percutaneous coronary intervention

We appreciate the authors for the prospective, unblinded observational study comparing the radial versus femoral access using haemostatic devices following percutaneous coronary interventions (PCI).[1] In routine clinical practice, the use of hemostatic or Vascular Closure Devices (VCDs) in patients with TransFemoral Access (TFA) undergoing coronary angiography (CAG) or PCI is limited and TransRadial Approach (TRA) is the default access for these procedures. Also, there are some recently published reports of complications with the use VCDs which needs attention and are important for the readers of the journal.

Periprocedural bleeding is an important factor for determining the prognosis of patients undergoing PCI. Various strategies have been tried to reduce the incidence of access and non-access site bleeding. Use of TRA, VCDs, bivalirudin as an anticoagulant has helped to reduce the access-site bleeding complications.[2] Although TRA is now the default access for CAG and PCI worldwide but still TFA may sometimes be required in many cases and therefore use of VCDs may be needed. It reduces haemostatic time, access-site bleeding complication and increases patient comfort by early ambulation. But the benefit of VCDs as compared to manual compression (MC) is not significantly different and in fact in several meta-analyses have shown increased risk of infection (0.6% with VCDs vs 0.2% with MC) and thrombotic complications (0.3% with VCDs vs none with MC).[3,4] A recently published review of post marketing surveillance of suture-based VCDs revealed 827 reports of major complications with Perclose ProGlide (Abbott Cardiovascular; Abbott Park, IL) and 175 reports of major complications with Prostar XL (Abbott Cardiovascular; Abbott Park, IL).[5] The authors concluded that in real-world practice, suture-based VCDs were found to be associated with complications, including vascular injury, difficulties with the device itself, and even death. Also, it has been observed that because of limited experience of TFA in routine interventional cardiology practice where TRA is the default access, the incidence of groin and device closure complications has increased ("Campeau Radial Paradox,")[6] . Therefore, the use of VCDs needs proper clinical training as TFA is seen only in limited cases where larger vascular access is required.

We would also like to comment that the two different groups (Radial vs femoral) in the study are not comparable as there is a significant difference in the clinical presentation of the patients. The STEMI patients are more in TRA group whereas Chronic Stable Angina (CSA) patients were more in TFA with VCDs group. There is also a clerical error in Reference 1, as total sum of patients with different clinical presentations (STEMI, NSTEMI and CSA) is 420 whereas it is mentioned as 419 in the heading of TRA group. We would also like to suggest that the conclusion section should be separate from discussion section in the manuscript.

References

1. Rana N, Vijayvergiya R, Kasinadhuni G, Khanal S, Panda P. Comparison of radial versus femoral access using hemostatic devices following percutaneous coronary intervention. *Indian Heart J*. 2021. https://doi.org/10.1016/j.ihj.2021.04.006.
2. Ortiz D, Jahangir A, Singh M, Alaqaband S, Bajwa TK, Mewissen MW. Access site complications following peripheral vascular interventions: incidence, predictors and outcomes. *Circ Cardiovasc Interv*. 2014;7:821–828.
3. Nikolsky E, Mehran R, Halkin A, et al. Vascular complications associated with arteriotomy closure devices in patients undergoing PCP: a meta-analysis. *J Am Coll Cardiol*. 2004;44:1200–1209.
4. Biancari F, D'Andrea V, Di Marco C, Savino G, Tiozzo V, Catania A. Meta-analysis of randomized trials on the efficacy of vascular closure devices after diagnostic angiography and angioplasty. *Am Heart J*. 2010;159:518–531.
5. Case BC, Kumar S, Yerasi C, et al. Real-world experience of suture-based closure devices: insights from the FDA manufacturer and user facility device experience. *Cathet Cardiovasc Interv*. 2021. https://doi.org/10.1002/ccd.29501 [Epub ahead of print].
6. Azzalini L, Tosin K, Chabot-Blanchet M. The benefits conferred by radial access for cardiac catheterization are offset by a paradoxical increase in the rate of vascular access site complications with femoral access. *The Campeau Radial Paradox. JACC Cardiovasc Interv*. 2015;8:1854, 64.

Surender Deora*
Department of Cardiology All India Institute of Medical Sciences, Jodhpur, Raj, India

https://doi.org/10.1016/j.ihj.2021.06.015

Rahul Choudhary
Department of Trauma and Emergency (Cardiology), All India Institute of Medical Sciences, Jodhpur, Raj, India

Atul Kaushik
Department of Cardiology, All India Institute of Medical Sciences, Jodhpur, Raj, India
E-mail address: atul_mamc03@yahoo.co.in.

* Corresponding author. Room no 3131, Administrative block, AIIMS, Basni II, Jodhpur, 342005, India.
E-mail address: drsdeora@gmail.com (S. Deora).

13 May 2021
Available online 6 July 2021