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Effects of Nitroglycerin on the Outcome of Percutaneous Coronary Interventions Via Distal Radial Approach

LETTER TO THE EDITOR

To the Editor,

In the catheterization laboratory, radial artery access is recommended as the first choice in most cases. The use of the radial approach provides significant clinical benefits, including reduced access site bleeding and early mobilization. However, radial artery access is associated with several complications, including radial artery spasm, radial artery occlusion, pseudoaneurysm, and arteriovenous fistula. Radial artery spasm is defined as sudden narrowing of the radial artery during cardiac catheterization and is usually diagnosed clinically and angiographically. It is characterized by pain in the forearm during manipulation of the catheter/sheath and difficulty in manipulating the catheter.[1,2]

In a recently published study,[1] the authors investigated the effect of nitroglycerin on the results of coronary angiography performed via distal transradial access. The researchers concluded that nitroglycerin was ineffective in preventing radial artery complications, including radial artery spasm. We are encouraged by the fact that they perform distal radial intervention, especially in cases with acute coronary syndrome. At the same time, the result they found makes "distal radial intervention without nitroglycerin" very advantageous, especially in hypotensive patients with right ventricular infarction, as the procedure can be performed without using nitrate. Radial artery spasm is usually managed conventionally by warm compression or medically with nitroglycerin, diltiazem, and sedative drugs.[1,2] However, the results of these agents in terms of reducing radial artery and access site complications are controversial.[1,2]

In the mentioned study,[1] Table 2 shows that the frequency of radial artery spasm was 28 (16.7%), and sedatives were used in the majority of patients, n: 77 (44%). The authors also noted that they used sedative medications to treat radial artery spasm. Based on this, the use of sedative drugs may have masked the true incidence of radial artery spasm and thus the results of the analyses. Another issue is to determine whether nitroglycerin is useful in reducing arterial spasm and other complications. For this purpose, it may be more appropriate to investigate whether nitroglycerin is an independent predictor of radial artery spasm and other complications by binary logistic regression analysis. For this purpose, well-designed, large-scale, prospective, and randomized studies are needed.

As mentioned above, although the effect of nitroglycerin on radial complications is controversial, nitroglycerin can be routinely administered when there is no contraindication to its use, as it is widely available in laboratories and is generally well-tolerated.

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In conclusion, accessing the distal radial artery with or without nitroglycerin administration is considered a safe option for appropriate patients during percutaneous interventional procedures.

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