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LETTER TO THE EDITOR

Letter by Candemir Regarding Article, "Subcutaneous Injection of Nitroglycerin at the Radial Artery Puncture Site Reduces the Risk of Early Radial Artery Occlusion After Transradial Coronary Catheterization: A Randomized, Placebo-Controlled Clinical Trial"

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To the Editor:

We read with great interest the article titled "Subcutaneous Injection of Nitroglycerin at the Radial Artery Puncture Site Reduces the Risk of Early Radial Artery Occlusion After Transradial Coronary Catheterization" published in the journal. First of all, we would like to commend Chen et al[1] for detailed description of the study and their findings which showed some similarities in terms of design and findings with a previous study performed by our group in 2009.[2] Both studies used somewhat same protocol of injection of subcutaneous nitroglycerin, and both studies evaluated the radial artery diameters, although at different timing in relation to performed procedure. In summary, radial artery diameter measured 3 minutes after the injection of subcutaneous nitroglycerin was found to be statistically increased compared with injection of saline in our study. In the second part of our study, we had observed that subcutaneous nitroglycerin injection had been associated with faster radial artery access and cannulation times, less episodes of radial artery spasm, and radial artery occlusion (RAO), although the latter 2 did not reach statistical significance (P=0.39 and P=0.49, respectively).

In their study, Chen et al[1] reported that subcutaneous nitroglycerin significantly reduced RAO. Although plausible and consistent with our findings, in our opinion, limitations of this study definitely necessitate a larger trial for better establishment of this relation. First, although statistically insignificant, the patients in the study had numerically higher use of calcium-channel blocker therapy. Some calcium-channel blockers, given intravenously, have been previously demonstrated to be associated with lower incidence of RAO as well.[3] Second, RAO was reported 24 hours after the procedure. We think that whether the lower incidence of RAO will be maintained on longer follow-up period, after cessation of subcutaneous nitroglycerin effect, should be investigated. Prolonged mean procedural and hemostatic duration reported in the study may have also led to high incidence of RAO, and it is interesting to note that including PCI patients did not decrease the RAO incidence, as previously observed.[4] We also would like to declare that we still utilize this technique for radial artery cannulation in our practice with no adverse effect to date.

In conclusion, although it has become strongly evident that subcutaneous nitroglycerin seems both safe and effective for increasing radial artery diameter, further evidence is still necessary to establish its efficacy for decreasing RAO incidence.

ARTICLE INFORMATION

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Disclosures

None.

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