

# Clinical Characteristics and Major Adverse Cardiovascular Events in Diabetic and Non-Diabetic Patients with Vasospastic Angina [Response to Letter]

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## Dear editor

We have received a letter from Dr. Zhang et al<sup>1</sup> inquiring about the significance of diabetes mellitus (DM) on the prognosis of patients with vasospastic angina (VSA) in our recently published paper.<sup>2</sup> Here, we answer their questions to the best of our knowledge. First, we thank you for your interest in reading our paper.

The key point of our paper<sup>2</sup> is that patients with VSA with DM exhibited significantly more atherosclerotic lesions, and experienced fewer focal spasms. However, patients with focal spasms may demonstrate a worse prognosis if they also have DM. Hence, we may need to observe such patients more carefully. Although the mechanism is entirely hypothetical, we have considered the possibility that focal spasm is frequently associated with atherosclerotic lesions;<sup>3</sup> in addition, DM may have some effect on the instability of these lesions. However, as you have emphasized, the association of DM with focal spasm, which tends to be less frequent, is not beyond the scope of our study.

As mentioned in the study limitations, the small number of focal spasms in patients with VSA with DM may have affected our analyses. In this study, patients with multi-vessel spasms, including both focal and diffuse spasms were categorized as focal spasms. Further, the major adverse cardiovascular events include readmission for cardiovascular diseases. Thus, the definitions of focal spasms and major adverse cardiac events (MACE) may vary from those in previous studies.<sup>4,5</sup> Finally, the present study rarely introduced sodium-glucose transporter 2 inhibitors and glucagon-like peptide-1 agonists, which have recently become mainstream in DM treatment.<sup>6</sup> Our study was meaningful because it reminded us that DM treatment should strongly emphasize managing VSA. However, the association between DM and VSA and focal spasm needs to be clarified in the future, including recent treatments in a multicenter registry, etc., by matching the definitions of focal spasm and MACE.

Again, we sincerely appreciate your interest in reading our manuscript.

## Disclosure

The authors report no conflicts of interest in this communication.

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