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Response to the Letter: “Coronary Artery Ectasia and Aneurysm”

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Abstract

Coronary artery aneurysms (CAA) and ectasia (CAE) are significant yet underdiagnosed conditions that influence coronary artery disease (CAD) outcomes. Although CAA and CAE were not included or considered in our study, they undoubtedly have the potential to impact revascularization outcomes.

Keywords: Coronary artery disease; aneurysm; ectasia.

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We appreciate the detailed and insightful commentary emphasizing the significance of coronary artery aneurysms (CAA) and coronary artery ectasia (CAE) in the context of coronary artery disease (CAD). The observations made by the authors provide a valuable contribution and expand upon a domain that is indirectly related to the focus of our study. We are responding to the commentary on our article "Long-term outcomes of myocardial revascularization in patients with multivessel coronary artery disease and comorbid pathology" [1].

CAA and CAE represent rare but clinically significant conditions characterized by localized or diffuse dilation of the coronary arteries, exceeding the diameter of adjacent normal segments or the largest coronary artery diameter by 1.5 times [2]. Despite their relatively low prevalence, these conditions may lead to severe cardiovascular complications, including thrombosis, myocardial infarction, and arterial rupture [3, 4]. The outcomes of revascularization in this patient group depend not only on the degree of coronary obstruction but also on structural abnormalities of the coronary artery. In this regard, early diagnosis and the development of individualized treatment strategies can significantly improve prognosis and reduce the risk of complications.

Although invasive assessment of CAA and CAE is primarily based on coronary angiography, advanced imaging modalities such as intravascular ultrasound (IVUS), optical coherence tomography (OCT), coronary computed tomography (CT), and multidetector computed tomography (MDCT) provide detailed visualization of coronary artery involvement, facilitating better treatment strategy selection [4]. It should be noted that research on patients with CAA and CAE remains limited, mainly comprising case reports, case series, and a few registries [4, 5]. Furthermore, there are no definitive guidelines for the pharmacological and interventional management of patients with CAA and CAE.

The choice between percutaneous coronary intervention (PCI) and coronary artery bypass grafting (CABG) in patients with CAA and CAE requires a thorough assessment of coronary anatomy, thrombosis risk, and the patient's clinical status. CABG is preferred for patients with large aneurysms or multiple lesions, whereas PCI may be an effective strategy for localized lesions [4]. In this regard, further studies are necessary to establish more precise recommendations for the selection of optimal treatment strategies for this patient population.

CAA and CAE were not included or considered in our study; however, their potential impact on revascularization outcomes warrants attention and further investigation. The integration of CAE/CAA-specific variables into studies assessing revascularization outcomes may provide a more comprehensive understanding of their influence.

We are grateful to the authors for their thoughtful commentary and appreciate the opportunity to engage in this discussion. Although our study did not specifically address these anomalies, we acknowledge their importance as potential modifiers of revascularization outcomes. Further research integrating the unique pathophysiological aspects of CAE/CAA into CAD studies is essential for optimizing treatment outcomes in this complex patient population.

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