

Rethinking periprocedural myocardial infarction risks: discrepancies and omissions in the study of rotational atherectomy outcomes

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We have read the article titled “Predictors of periprocedural myocardial infarction after rotational atherectomy” by Michał Błaszkiwicz *et al.* [1] with great interest. The study provides valuable insights into the predictors of myocardial infarction (MI) following rotational atherectomy (RA), particularly in the context of an aging population with increasing comorbidities, which leads to complex calcified coronary lesions. While the study is well-designed and contributes significantly to our understanding, we wish to highlight a few areas that might benefit from further clarification or addition to enhance the study’s impact and applicability in clinical practice.

Firstly, the inverse relationship between previous coronary artery bypass grafting (CABG) history and high SYNTAX score as predictors of periprocedural MI is intriguing. Typically, patients with a CABG history are expected to present with higher SYNTAX scores due to more advanced coronary disease [2]. However, the study identifies prior CABG as a negative predictor of MI while associating high SYNTAX score with increased MI risk. This could appear contradictory and merits a more detailed discussion, possibly exploring the underlying mechanisms that might influence these observations. Such an analysis could provide deeper insights into patient selection and risk stratification for RA procedures.

Additionally, the article does not mention whether protective distal filters were used during the RA procedures. These filters are known to reduce the risk of no-reflow and slow flow phenomena, potentially decreasing the incidence of periprocedural MI as highlighted in recent studies [3]. The inclusion of information on the usage of distal protection devices could provide a more comprehensive understanding of procedural safety and outcomes.

Furthermore, the study does not address the duration of burr use or the volume of contrast medium used during RA, both of which are critical factors that can affect procedural outcomes. Prolonged burr use has been associated with increased risk of complications, including periprocedural MI [4]. Similarly, higher volumes of contrast medium can lead to contrast-induced nephropathy, which in turn may elevate the risk of periprocedural MI [5, 6]. Information on these factors would be beneficial for a more nuanced interpretation of the results and for formulating guidelines to optimise procedural techniques to minimise risks.

In conclusion, while the study by Błaszkiwicz *et al.* is a valuable addition to the literature, addressing these points could further enhance its utility for clinicians. We believe that discussing these aspects would strengthen the paper’s conclusions and provide readers with a more rounded perspective on managing patients undergoing RA.

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Ethics approval

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Conflict of interest

The authors declare no conflict of interest.

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