Title: Successful bailout stenting strategy against rare spontaneous retrograde dissection of partially absorbed magnesium-based resorbable scaffold: A case report

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Authors: Hung et al.

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Round-1:

Point-to-point responses to reviewer 1:

Specific Comments to Authors: Coronary revascularization with PCI primarily involves using balloon angioplasty and intracoronary stenting with either drug-eluting stents (DES) or bare metal stents (BMS). In this case report, Spontaneous retrograde dissection of a partially absorbed MgBRS was successfully treated using bailout sirolimus-eluting coronary stent strategy. By my knoweledge, Spontaneous coronary artery dissection is rare. Reverse dissection of post-magnesium-based resorbable scaffold (MgBRS) stenting is even rarer. The manuscript adequately describe the background, present status and significance of the study.The discussion accurate and does it discuss the paper's scientific significance and relevance to clinical practice sufficiently.The figures, diagrams and tables sufficient, good quality and appropriately illustrative of the paper contents.

Thank you so much. We especially appreciate the precious experience you have provided, and the information you have shared with us. Your assistance has been invaluable to me. Again, thank you so much. We greatly appreciate your generosity.

Point-to-point responses to reviewer 2:

Specific Comments to Authors: -Discus role of imaging using these refs -Abdel Razek AAK, Elrakhawy MM, Yossof MM, Nageb HM. Inter-observer agreement of the Coronary Artery Disease Reporting and Data System (CAD-RADS(TM)) in patients with stable chest pain. Pol J Radiol 2018;83:e151-e159. -English language correction through the manuscript -Discuss the merits and limitations of the technique applied

Thank you for reviewing our manuscript and giving many useful comments to us. I would like to express my appreciation to the referees for suggesting how to improve our paper.

The degree of coronary artery stenosis is an important issue for treatment planning, whether by medical therapy or by revascularisation. Different imaging modalities are used for the evaluation of the coronary arteries. The present results did show excellent

inter-observer agreement between both reviewers for the degree of coronary artery stenosis with coronary CTA and the classification of stenosis according to CAD-RADS.

As a second test after the stress testing, CT angiography may improve risk stratification for people with suspected stable angina, according to a post hoc analysis of the SCOT-HEART trial. For people who had abnormal or inconclusive results on stress testing, the addition of coronary CT angiography led to numerically fewer clinical events (3% vs 6% for ECG alone), according to researchers led by Trisha Singh, BM, British Heart Foundation Centre for Cardiovascular Science at University of Edinburgh, Scotland. Their report was published online in JAMA Cardiology.

However, in this patient, myocardial perfusion scans were previously performed to determine the extent and location of myocardial ischemia and revealed partial reversibility with notable ischemia at the apical segment. Moreover, a distal edge vascular response (EVR) was apparent under coronary angiography (gold standard technique) and optical coherence tomography (OCT) evaluation during admission.

In the absence of evidence-based randomized trials to analyze the outcomes of different strategies, the optimal treatment for spontaneous coronary artery dissection remains unknown.

However, according to the principle of treating coronary dissection, sealing the entry point of the dissection is essential and sufficient. Simply deploying a single stent from proximal to distal of the LAD coronary artery can be of merit.

Similarly, due to the lack of conventional data, expert consensus has recommended the use of biodegradable polymer sirolimus-eluting stents (BP-SES) (Orsiro; Biotronik, Bulach, Switzerland) because its coating does not interfere with the residual magnesium alloy.

Thank you for the valuable suggestions. We should like to thank the referees for their helpful comments and hope that we have now produced a more balance and better account of our work.

Round-2:

Specific Comments to Authors:-Add the uniqueness of this case report. -Add more on the basis of this disease in the introduction -Discus role of imaging in evulation of CAD using these refs -Abdel Razek AAK, Elrakhawy MM, Yossof MM, Nageb HM. Inter-observer agreement of the Coronary Artery Disease Reporting and Data System (CAD-RADS(TM)) in patients with stable chest pain. Pol J Radiol 2018;83:e151-e159.

Spontaneous coronary artery dissection is rare. Reverse dissection of post-magnesium-based resorbable scaffold (MgBRS) stenting is even rarer. The types of coronary artery dissection, according to the NHLBI classification system, include type A and B, which are clinically benign, whereas types C-F may lead to catastrophic clinical events unless they are promptly and safely treated. Laceration of the coronary endothelium and rupture of the vasa vasorum are possible pathological mechanisms that may explain the spontaneous separation of the layers of the vascular wall[14]. Side effects of the degradation products from MgBRSs are not expected since magnesium plays a key role in many biological systems. However, no data are available regarding the possible consequences of a rare spontaneous retrograde dissection of a partially absorbed MgBRS. Thank you so much. We especially appreciate the precious experience you have provided, and the information you have shared with us. Your assistance has been invaluable to me. Again, thank you so much. We greatly appreciate your generosity.