

Drug-eluting stent in-stent restenosis and re-restenosis: A hard time story



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To the Editor,

We have read with great interest the article entitled “Drug-eluting stents or balloon angioplasty for drug-eluting stent-associated restenosis: an observational follow-up study of first-time versus repeated restenosis” by Abdelmegid and colleagues [1]. The authors conducted an observational follow-up study in which they evaluated two strategies for the treatment of first-time drug-eluting stent in-stent restenosis (DES ISR) and re-restenosis of DES-treated DES ISR: balloon angioplasty (BA) versus re-DES. The study concluded that the re-DES strategy produced better outcomes than did BA in the treatment of first-time DES ISR, but this benefit did not extend to the re-restenosis cases. We would like to highlight some issues with the methodology of this study.

First, when the treatment of DES ISR fails, finding suitable therapy is difficult and depends on

identifying the mechanism underlying the failure of the previous DES implantation. This identification is even more important in the case of re-restenosis of DES-treated DES ISR. Intracoronary imaging [intravascular ultrasonography (IVUS) and optical coherence computer tomography] results may be a key factor in this regard. Stent fracture and underexpansion can be identified angiographically, but malapposition of the stent requires IVUS or optical coherence tomography for correct diagnosis. In the study conducted by Abdelmegid and colleagues [1], only 13% of patients with first-time DES ISR and 10% of patients with re-restenosis of DES-treated DES ISR were assessed by IVUS. In addition, the selection procedure for treatment (balloon angioplasty vs. re-DES) was left to the preference of interventional cardiologists, but the authors did not indicate what criteria practitioners were using to make their decisions. We believe that a lack of consistent criteria for treatment selection could influence the results.

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Second, a first-generation DES (Cypher, Taxus) was used for the treatment of first-time DES ISR and re-restenosis of DES-treated DES ISR, but it is not clear what type of DES were treated. This is important information because switching to a different type of DES (hetero-DES approach) produces better clinical results than using the same or a similar type of DES (homo-DES approach) or BA as demonstrated by Alfonso and colleagues [2] in the RIBS III trial.

Third, the time course between DES implantation and first-time ISR or re-restenosis is not specified. Any time course <12 months is associated with a higher incidence of major adverse cardiac events [3]. Were the time intervals of the four subgroups similar?

BA may be a strategy to follow in cases of re-restenosis of DES-treated DES ISR, but before

recommending this strategy, the mechanisms underlying this difficult situation must be clarified.

References

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