Interventions on repeated stent restenosis: approach to restenosis in drug-eluting stent

Janko Szavits-Nossan*, Robert Bernat, Krešimir Štambuk, Igor Šesto, Tomislav Šipić, Davor Richter, Hrvoje Stipić

Clinic for Cardiovascular Disease Magdalena, Krapinske Toplice, Croatia

Introduction: Restenosis in drug-eluting stents (DES) is still a problem, although more recent generations of drug-eluting stents significantly reduce the restenosis rate. The optimal strategy for treating restenosis in DES is still not clear.

Objective: Discussion on different treatment strategies for restenosis in DES.

Patient: A case report presenting a patient with repeated restenosis after stent implantation. The patient is a 62-year old male with hypertension and dyslipidaemia presenting with stable angina in 2005. He was treated for RCA stenosis with the bare-metal stent (BMS) implantation. In 2006, balloon angioplasty was performed due to focal in-stent restenosis. Few months later sirolimus-eluting stent was implanted for repeated in-stent restenosis. During follow-up the patient was without chest pain or evidence of ischemia until 2011 when restenosis in DES was found and was treated with balloon angioplasty. Few months later the same lesion was treated with paclitaxel-eluting stent implantation. In 2012 the patient presented with unstable angina and was treated with another SES for the same lesion (ISR).

Method: Different strategies on treating DES restenosis will be discussed based on the literature review. Implantation of

another DES has proven to be more effective than balloon angioplasty. There is no clear evidence that one type of DES is superior to another. Different pathophysiology of DES restenosis is possible. Drug-eluting balloons have shown no inferiority to second DES implantation strategy.

Conclusion: This case report presents what we know from the clinical practice. DES restenosis is rare but significant problem in percutaneous coronary interventions and the best treatment strategy is yet to be established.

KEYWORDS: drug-eluting stent, restenosis, percutaneous coronary intervention.

Received: 10th Mar 2013

*Address for correspondence: Magdalena - klinika za kardiovaskularne bolesti, Ljudevita Gaja 2, HR-49217 Krapinske Toplice, Croatia.

Phone: +385-49-244-444

E-mail: janko.szavits-nossan@magdalena.hr

Literature

1. Indermuehle A, Bahl R, Lansky AJ, Froehlich GM, Knapp G, Timmis A, et al. Drug-eluting balloon angioplasty for in-stent restenosis: a systematic review and meta-analysis of randomised controlled trials. *Heart*. 2013;99(5):327-33.
2. Ishikawa K, Aoyama Y, Hirayama H. Management of drug-eluting stent restenosis. *J Invasive Cardiol*. 2012;24(4):172-82.
3. Nathan S. DES "club sandwich": a viable (if imperfect) option for recalcitrant restenosis. *J Invasive Cardiol*. 2011;23(9):369-70.