Prošireni sažetak / Extended abstract

What is the limit of capability of using the bioresorbable vascular scaffold?

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The number of deaths caused by coronary artery disease (CAD) in the USA is 145/100.000, while in Hungary it is 332/100.000. CAD is progressive, characterized by narrowing or even blockage of the arteries causing restricted blood flow to the heart. Several risk factors can be modified by lifestyle changes, but due to other risk factors, the progression of the disease cannot be stopped despite all of the aggressive pharmacological therapies. There is expectation for brand new devices and techniques in the therapy of CAD.

The first bioresorbable vascular scaffold (BVS) implantation around the world was performed by P. Serruys and his team in the Netherlands. In Hungary the first BVS was implanted in 2012. This was the second generation BVS. The BVS is a temporary scaffold indicated for improving coronary luminal diameter that will eventually resorb and potentially facilitate normalization of the vessel function in patients with ischemic heart disease due to de novo native coronary artery lesions.

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One of the first institutes in Hungary was the Heart Institute of the University of Pécs, which had the opportunity to apply several BVS. In our lab some of the procedures were controlled by optical coherence tomography (OCT), which ensured the perfect apposition and sizing of the stents. The treated lesion length should be less than the nominal scaffolding length, (12-28 mm) with reference vessel diameters ≥2.0 mm and ≤3.8 mm. The scaffold is contraindicated for the patients who are contraindicated to receive antiplatelet or anticoagulant therapy, who show hypersensitivity to aspirin, clopidogrel, ticlopidine, prasugrel, ticagrelor, everolimus, poly(L-lactide), poly (D,L-lactide), or platinum. In total, we have implanted 14 BVS in 7 patients so far, which is 2 scaffolds per patient on the average. We have both used the BVS with the typical indications and with off-label indications as well. We would use this poster to share our experience we have gained by applying the scaffold. As the second point, we would like to highlight the most frequent complications and the special implantation technique which is mandatory to be carried out while a bioresorbable vascular scaffold system is being implanted.

KEYWORDS: coronary artery disease, bioresorbable vascular scaffold, optical coherence tomography.

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Literature

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