


eComment: Stabilizing aortic tissue after aortic root surgery in Marfan syndrome

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We would like to congratulate Okamoto and colleagues for their interesting report [1]. Their case illustrates again how difficult it is to treat and manage patients with Marfan syndrome before and even after several aortic (root) surgeries.

Ostial aneurysm formation is a well known complication after aortic root surgery in Marfan syndrome [2]. We agree that it is crucial to excise as much aortic root tissue as possible when re-implanting the coronary arteries in the Dacron graft. We use felt or pericardial patches to strengthen the suture-line around the ostium to prevent future aneurysm formation at this area. Unfortunately, progressive aortic dilatation can sometimes not be prevented, and it is clear that aneurysm formation of the left trunk itself cannot be prevented by a small, reinforced button technique alone.

Interestingly, it has recently been shown that losartan, an angiotensin II type 1 receptor blocker, and widely used medication to treat arterial hypertension, has the potential to stabilize the aortic root tissue in Marfan syndrome [3, 4]. Brooke and colleagues recently published from Johns Hopkins a small pediatric cohort study in which the use of angiotensin II type 1 receptor blocker therapy in patients with Marfan syndrome slowed the rate of progressive aortic root dilatation from 3.54 ± 2.87 mm per year during previous medical therapy to 0.46 ± 0.62 mm per year during angiotensin II type 1 receptor blocker therapy (P < 0.001) [5].

These findings are incredibly encouraging for patients with Marfan syndrome, and we think that it might, therefore, be time to start patients with Marfan syndrome before and after aortic root surgery — on losartan therapy. However, whether angiotensin II type 1 receptor blocker therapy is effective in preventing ostial and coronary dilatation after aortic root surgery in Marfan syndrome requires, of course, further studies.

References


eComment: Giant left coronary ostial aneurysm after modified Bentall procedure in a Marfan patient

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One of the typical problems in the long follow-up period after a classic Bentall operation is the formation of coronary ostial aneurysm. According to data of various authors the frequency of this complication achieves 8.5%. At the same time, messages on formation of coronary ostial aneurysm, when performing the modified Bentall technique, are really very rare. However, the inherent weakness of a connecting fabric in patients with Marfan syndrome, in a great degree, possibly promotes development of this complication. We congratulate the authors for such an interesting message [1].

In our centre, for the last period of time, three patients with Marfan syndrome underwent reoperation after the classic Bentall technique with the use of a synthetic conduit. In all three cases we eliminated coronary ostial aneurysm, thus managing to execute direct re-implantation of coronary ostial in the new conduit. In all cases the apertures in the conduit were done in exact conformity with the diameter of the coronary ostium. Besides that, since 1990, more than 80 patients with Marfan syndrome underwent implantation of xenopericardial conduit manufactured at the Bakoulev Center for Cardiovascular Surgery [2]. In the remote period of more than 15 years follow-up none of those patients was diagnosed coronary ostial aneurysm.

References
