Aortic-root aneurysm repair: how to deal with an abnormal circumflex artery from the right coronary sinus

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I read with great interest the clinical scenario by Siepe et al. about the detection of abnormal circumflex artery from the right coronary sinus in a patient scheduled for root aneurysm repair [1]. Aortic valve-sparing operations is a safe and useful surgical operation for treating patients with aortic root aneurysms and ascending aorta aneurysms with dilated aortic sinuses. The long-term results are excellent [2]. Our treatment plan would be the following: in this patient with an aortic root aneurysm, as we decide that the native cusps are normal, the ascending aorta and the sinuses of Valsalva are excised, leaving a rim of 5 mm above the aortic annulus. The right coronary artery button is left in situ. The circumflex artery button, which is in close proximity to the commissure between the non- and the right coronary sinus is also left in situ (the right coronary sinus is left in situ containing both ostia, it is a composite button). The left anterior descending descending artery button which is not displaced is prepared as normal. A suitable Dacron graft is then selected and a vertical slit of 2 to 3 mm is made in its proximal end so as to accommodate the in situ coronary sinus with both ostia. The Dacron graft is tied down to the subannular plane. The slit in the Dacron graft is trimmed to create an orifice to house the native coronary sinus. The coronary arteries are checked to see if there is kinking or compression by the Dacron. The right aortic sinus with both ostia is then sutured to the Dacron graft by continuing the polypropylene suture that will be used to re-suspend the adjacent commissure. The upper and the lateral border of this sinus with both ostia is sutured first and when reaching the lower border, the remaining aortic annulus and sinus remnants are re-suspended in the usual way. The other coronary button is re-implanted as normal. The rest of the operation is performed as usual [3].

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References

