The authors reported no conflicts of interest.

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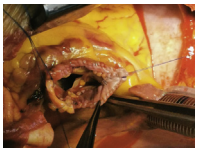

AORTIC ROOT REPAIR USING PERICARDIAL AUTOGRAFT FOR ACUTE TYPE A AORTIC DISSECTION

To the Editor:

The recent study by Yang and colleagues[1] showed that direct approximation of the dissected layers of the aortic wall using a 5-0 PROLENE running stitch is an equally safe and effective method compared with buttress repair using Teflon or layer fixation with biological glue. Motekallemi and colleagues report a modification[2] to the aortic root repair technique in type A dissection proposed by Tanaka and colleagues.[3] Motekallemi and colleagues propose to invert the redundant adventitia to the inner lumen of the aorta and tacking it to the intima by horizontal mattress sutures using 6-0 PROLENE, and a 4-0 PROLENE running suture was used above the horizontal suture line for false-lumen occlusion.

Although both techniques have good surgical results and are used by some surgeons in our center, there will be remaining dissected tissues at the root. The residual false lumen and blood flow into the false lumen from needle hole intimal tears have the potential risk of proximal bleeding. The remaining dissected tissues have adverse effects on the long-term durability of root reconstruction. A significant amount of false lumen near the coronary ostia may result in coronary stenosis due to blood flow and thrombus compression.

To solve the aforementioned problems, we use pericardial autograft to reconstruct the root and significantly reduce remnant dissection tissues. The dissection intimal flap was removed to the normal aorta wall near the annulus at the noncoronary sinus, leaving a 5-mm rim of intimal flap near the commissures and coronary ostia. Root reconstruction using pericardial autograft was initiated at the lowest point of the noncoronary sinus, suturing of the normal aorta near the annulus to pericardial patch, suturing the annulus and adventitia to the pericardial patch near the commissure in order to resuspend and fasten the commissure, suturing the intimal flap rim and adventitia near the coronary ostia to the pericardial patch in order to reconstruct the coronary ostia. The procedure was performed using a running 5-0 PROLENE suture. Finally, the pericardial patch and dissection adventitia was trimmed to equal height and sutured together using a running 5-0 PROLENE suture (Figure 1). Using our technique, we remove almost all the intimal flap, leaving only a small amount near the coronary ostia and aortic commissures, using a pericardial patch as a new aortic wall while preserving the aortic adventitia to fix and strengthen the new pericardial aortic wall.

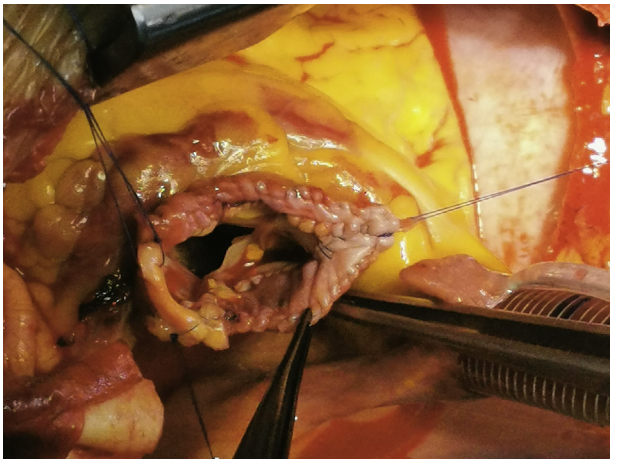

FIGURE 1. Using pericardial autograft patch to reconstruct sinus, coronary ostia, and resuspend commissures.

In our opinion, aortic root repair with pericardial autograft is a safe and effective technique to treat acute type A dissection involving the sinus. Using this technique, remnant dissection tissues could be significantly reduced, which may subsequently decrease the risk of proximal bleeding and hence increase long-term durability.

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