A piece of the aorta as patch material for angioplasty of the left main coronary artery

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Keywords: Left main coronary artery • Ostial stenosis • Patch material • Surgical angioplasty

Harling et al. \cite{Harling2012} had a motivating article about surgical patch angioplasty of the left main coronary artery (LMCA). They gave a comprehensive and up-dated review of the issue including the different surgical methods and the variety of patch materials used so far: pericardium, saphenous vein, internal thoracic artery and pulmonary artery. However, they also stated that the optimal patch graft material remains to be defined. It gives the opportunity to add to the list of possible useful graft material yet another one, which is a piece of the ascending aorta.

We have treated 2 patients with an aortic patch angioplasty and both had a postoperative course without complications and short-term follow-up was unremarkable as well. The technique is similar to that described by Liska et al. \cite{Liska1999} with one major exception. Before transection of the aorta, an oval piece of the aorta is harvested from the anterior part of the aorta in the intended transection line. Instead of using a segment of the right internal thoracic artery as used by Liska et al. \cite{Liska1999}, the harvested piece of aorta is used as a patch material on the incised LMCA and the patch is sutured in a continuous fashion enlarging both the coronary ostium and the aortotomy as advised by Dion et al. \cite{Dion1990}. The transected aorta is reconstructed with a running suture. The gap after the removal of the oval piece of aorta represents no problem during this closure. The aortic wall should not be thickened or arteriosclerotic.

We do believe that a piece of aorta could also be harvested when performing surgical angioplasty on the right coronary ostium. It might be done as a separate horizontal incision or as part of the vertical aortic incision going into the right coronary artery.

We have only a short-term clinical follow-up. The long-term result is needed including radiological or ultrasound assessments to evaluate whether the aorta is a comparable alternative to other patch materials used in surgical patch angioplasty for the treatment of proximal coronary artery stenosis.

REFERENCES

