


eComment: Mini resternotomy for aortic valve replacement in patients with patent bypass

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We read with great interest the article of Dell’Amore et al. [1]. In our opinion the authors deserve praise for their excellent results with a very difficult subset of patients. The authors demonstrated that a minimally invasive approach can be safely performed also in patients with patent coronary artery bypass grafts who require aortic valve replacement. Of particular interest is the fact that with this approach, the limited surgical dissection and the avoidance of grafts manipulation may significantly reduce bleeding and the incidence of injuries to coronary grafts.

We have three questions for the authors:

1. We have recently reported an extremely low need of blood transfusion in patients with patent bypass grafts who underwent re-operative mitral surgery through a right minithoracotomy [2]. Did the authors find similar data on this aspect in their series?

2. In our center, isolated aortic valve replacement is routinely performed through a ministernotomy extending up to the second intercostal space or through a right minithoracotomy in the same intercostal space. In order to reduce the surgical dissection and the congestion of the working field, we use peripheral venous cannulation via the right femoral vein. Do the authors experience other techniques of myocardial protection in the same setting? Of course, myocardial protection is a major issue for these patients, even more challenging in case of hypertrophied hearts due to aortic stenosis. We agree with Battellini et al. [2] that different strategies should be optimized to the individual patient findings.

3. In two patients a RIMA graft was present. Is there additional complexity in these cases?

4. Can you please give some details about the anesthesiologic management of these patients? Have you adopted any ‘fast track’ protocol?

5. In the discussion paragraph, you admit that the surgical approach should still be considered the gold standard treatment even in high-risk patients although catheter-based approach could be promising for them in the future. Which is your opinion about the trans-apical approach in these cases?

Thank you very much for this fine contribution.

References


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Surgical management of aortic valve disease in patients who already underwent bypass grafting is a matter of debate. In the paper of Dell’Amore and colleagues [1], 10 patients with patent grafts underwent aortic valve replacement through a J-shaped ministernotomy in the 3rd or 4th intercostal space over a period of almost two years. The authors are to be congratulated for these excellent outcomes. We agree with them about the surgical approach in ministernotomy since we believe that the minimally invasive approach shows its own best just in these intricate situations as it happens with the heart-port technique for mitral re-operations or mitral surgery in patent grafts. We would like to comment about the methods adopted by the authors in this cohort of patients.

1. The surgical technique consisted in a limited dissection of the proximal vein-graft anastomosis without clamping the LITA. A single dose of antegrade blood cardioplegia was administered but when the heart resumed a sinus rhythm after a few minutes, it was elected to use no more cardioplegia allowing the heart to beat empty throughout the procedure. Did you experience other techniques of myocardial protection in the same setting?

2. Another important issue is the location of the proximal anastomoses. In your experience, was cross-clamping feasible below the proximal anastomosis leaving venous grafts perfused? In this case, the technique suggested by Sutherland and colleagues [3] seems to be a good choice.

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References

