

MEETING ABSTRACT

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Comparison of the left ventricular apex versus other arterial cannulation sites for the operative management of acute type A aortic dissection

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Background/Introduction

The selection of the arterial inflow site for cardiopulmonary bypass during surgical treatment of patients with acute aortic dissection remains a very important issue. Several arterial cannulation sites, including left ventricular apex, were popularized over the years.

Aims/Objectives

The aim of the study was to analyse the influence of transapical cannulation on the outcomes of surgical treatment of acute type A aortic dissection.

Method

Between January 2010 and January 2015, emergent surgical aortic repair was performed in 158 consecutive patient with acute type A aortic dissection. In all patients open distal anastomosis was performed using deep hypothermic circulatory arrest. Patients were divided into two groups: transapical cannulation group and other cannulation sites group (including femoral and axillary artery cannulation). Operative variables and intrahospital outcomes were compared between groups.

Results

The most frequent cannulation site was the transapical cannulation (103 patients, 65.2%). The other sites cannulation group (55 patients, 34.8%) included 33 patients with femoral and 22 patients with axillary artery cannulation. The mortality rate for the entire cohort was 17.7%. The mortality rate in the transapical group was 17.5% and 18.2% when other arterial cannulation sites

were performed ($p = 0.91$). There was no difference in major intrahospital outcomes between groups: postoperative stroke rate was 7.8% in transapical group and 9.1% in other cannulation sites group ($p = 0.77$), myocardial infarction rate was 4.9% vs 5.5%, (transapical group vs other cannulation sites group respectively, $p = 0.87$), and the incidence of postoperative acute renal failure in transapical group was 9.7% vs. 9.1% in the other cannulation sites group ($p = 0.9$).

Discussion/Conclusion

This study suggests that transapical cannulation can be routinely used as a fast and safe method to establish cardiopulmonary bypass in patients with type A aortic dissection. No difference in operative outcomes was found when transapical cannulation was compared to the other cannulation sites.

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