Frozen elephant trunk in acute type A aortic dissection through partial upper sternotomy: considerations for the real world setting

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With great interest we read the recent study by Xian-Biao Xie and colleagues (1). Their data showed that extensive repair of acute type A aortic dissection with serious involvement of the arch vessels through partial upper sternotomy is feasible and superior to conventional full sternotomy in terms of blood loss, postoperative ventilation time, and treatment costs. [1] Comparison between the early series (full sternotomy) versus a late series (partial upper sternotomy) was conducted through a propensity score matching in order to overcome potential biases deriving from non-randomization. Only one senior surgeon operated on the entire cohort including more than 250 repairs between 2015 and 2018. Of note, as specified in the methods section the same surgeon has performed over 1000 AADA procedures.

In this context, we find two misleading concepts for correct data interpretation and applicability into the real world setting.

First, the improvement through experience over time of a single surgeon is insufficiently considered. This could have biased the results despite propensity matching.

The second issue relates to the general applicability of this minimal approach in real world setting. Despite recent improvements in surgical care, the in-hospital mortality rate for type A aortic dissection has remained at approximately 20 percent over the past 20 years. [2-4]. In this context it is of utmost priority that new techniques and approaches need to meet a balance between effectiveness and safety while addressing.
Whether the very impressive outcomes of partial upper sternotomy for the extensive repair of acute type A aortic dissection, as described by Xian-Biao Xie and colleagues, are reproducible in a real world setting regarding the experience of many other surgeons [5] need to be cautiously considered. (Fig. 1)
References


Fig. 1 / Comparison of mean annual volume (MAV) of type A dissection procedures per surgeon
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