Letter to the Editor

Endovascular treatment of acute traumatic aortic rupture: radical solution or postponement of the problem?∗

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Endovascular stent-grafting of the traumatic thoracic aortic rupture constitutes an alternative treatment option to conventional surgical repair. The advantages of endovascular treatment over conventional surgical repair include the avoidance of thoracotomy (in the majority of patients), cardiopulmonary bypass and related complications (SIRS, ARDS), systemic heparinization complications, ischemia of spinal cord during aortic cross-clamping, and finally distal arterial ischemia [1]. While, endovascular treatment seems to have an advantage over conventional surgical repair concerning early results, this technique has in our opinion, two major drawbacks: (A) its superiority concerning early results is not as significant as reported, and (B) its late results still remain unknown and may be underestimated. In fact, reading this excellent study [1] and several others [2,3] we could note the following: (A1) Although the mortality is higher in the surgical group in comparison to the stenting group (21.2% vs 7.7%), this difference is not statistically significant. (A2) Concerning the incidence of paraplegia there were no statistically significant differences between two groups. In addition, the reported two cases of paraplegia were not related to the surgical procedure itself. (A3) The accidental occlusion of left subclavian artery, reported in a high percentage (51%) of stented patients, constitutes a serious complication, especially for young patients such as those in this study (average age = 36 years) [1]. However, it should be noted the fact that the majority of patients were young, consequently this complication becomes much more meaningful as it is related to the future professional return, and the potential use of IMA. Indeed, 25% of the patients with the above complication had ischemic complications of the arm and underwent re-operation with low heparinization. Moreover, it would be interesting for us to have clarification if the two patients with the late neurological problem belong to the subgroup with the accidental occlusion of the LSA. (A4) Conversion to conventional surgery was needed in three cases.

(B1) The mean follow-up time was significantly shorter in the endovascular stent-graft group compared to surgical group: 2.2 years vs 6 years, a fact that will no doubt influence positively the late results of the endovascular stent-graft technique. (B2) The quality of the follow-up was greatly different in the two groups: only 25% of patients belonged to endovascular stent-graft group evaluated with CT-scan. As a consequence, further complications of this group may not have been reported. The reported two deaths in following 18 months due to late sequelae or severe cerebrospinal trauma might be related to the stent technique. In conclusion, endovascular stent technique in unstable patients with polytrauma and simultaneous craniocerebral trauma attenuates the surgeon’s stress as it offers a temporary solution to a difficult situation, rendering the surgeon a winner according to Marty [4]. However, this technique in a great number of patients may simply postpone the problem (possibly with different clinical appearance) to the future. A more reliable and also longer follow-up is needed in order to clarify if the endovascular stenting is the real winner.

References


The authors of the original paper [1] were also invited to reply to this Letter to the Editor but they did not respond.

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Reply to the Letter to the Editor

Reply to Apostolakis et al.

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In the letter ‘Endovascular treatment of acute traumatic aortic rupture: radical solution or postponement of the problem?’ Apostolakis et al. raise the question about the superiority of the endovascular approach and its durability [1]. Such discussion is to be encouraged when another method, and especially one as revolutionary as endovascular, is looking to replace a well established open surgical treatment that has itself continuously improved for half a century. However, the essence of the endovascular repair of traumatic aortic rupture is about emergency management of a life threatening injury in a severely traumatized patient including a minimal (additional) trauma load by the operation. Specifically, the medium and long-term issues related to the endovascular repair