INVITED COMMENTARY

Commentary on ‘Hemothorax Management After Endovascular Treatment For Thoracic Aortic Rupture’

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The expansion of endovascular repair has contributed to decreased mortality rates in acute aortic syndromes, yet the outcome of patients with descending thoracic aortic ruptures remains unsatisfactory. The development of severe, early, and late complications that are poorly addressed, as well as the lack of standardized and well known management, remain substantial concerns, increasing the overall fatality related to the disease. In depth understanding of patients with aortic rupture, usually only sporadically treated, can be provided by more consistent numbers pooled from registries. In this issue of the European Journal of Vascular and Endovascular Surgery, data from a multicenter experience provide useful insights on the management of 56 patient with hemothorax, a common but undefined complication after descending thoracic ruptures treated by thoracic endovascular repair (TEVAR). The authors used an aggressive approach, draining 37.5% of the patients, with comparable rates in those with traumatic and non-traumatic thoracic aortic rupture (48% vs. 33%; p = .84), despite the worse respiratory conditions, due to the traumatic incident, in the former group of younger patients. Both, chest tube and surgical evacuation, were applied, even though the first strategy was preferred. This aggressive approach allowed for the lack of any effect of respiratory complications on mortality and for a low in hospital mortality rate (12.5%). Nevertheless, the lack of a comparison group with a less aggressive drainage strategy and the non-random allocation of treatment do not allow the derivation of strong recommendations on the best management of hemothorax in aortic ruptures. It cannot be excluded that a more conservative treatment of hemothorax, as used by others in diverse patient settings, would have been detrimental or could have allowed similar survival.

Despite the low in hospital mortality, almost half the patients treated by TEVAR for acute thoracic rupture and hemothorax in this multicenter registry died within 5 years: the survival estimates at 5 years being 61%. This finding may suggest hemothorax as a predictor of poor outcomes, whatever the reason for thoracic rupture. Of relevance, late mortality was mainly related to cardiac ischemic events. Thereby, a further lesson from this multicenter experience of acute aortic treatment is the need to address globally the cardiovascular risk of patients after resolution of the hyperacute phase: most of the non-traumatic aortic ruptures were indeed from patients with atherosclerotic thoracic aneurysms and high cardiovascular risk burden. Patients were old and obese, with a frequent history of cardiac disease, diabetes, and hypertension. From this multicenter study we do not know if, or how many of these patients after acute thoracic rupture, were maintained on best medical treatment and were following the recommended goal directed lifestyles to prevent cardiovascular disease and mortality. Despite the demonstrated benefit and the extensive application of medical therapy (e.g., statins, antihypertensives, antiplatelets, etc.) in cardiology patients, there is still a lack of a systematic and aggressive medical approach for many vascular patients, especially when surviving an acute catastrophe such as acute aortic rupture.

In summary, there is a need to standardize the approach to patients with acute aortic events to decrease the impact of major pulmonary and cardiac complications on the high (early and late) fatality rates related to the disease, and further studies should focus on this. While the aggressive use of hemothorax drainage, as suggested by the recent multicenter study, is still unsupported by solid widespread evidence, following recommended cardiovascular goals is a well demonstrated and useful adjunct that can likely improve the survival of patients with acute aortic syndromes.

REFERENCES


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