

INVITED COMMENTARY

Open repair of thoraco-abdominal aneurysms

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In this issue of the HJVES Moulakakis et al.¹ reported systematic review and meta-analysis on open repair of ruptured thoraco-abdominal aortic aneurysms (RTHAA). They searched English-language literature published until January 2019 and 16 articles with 1036 treated patients with RTHAA were identified and included in analysis. They found that mortality rate is improving over decades and it was substantially lower in papers reporting results of treatment of all TAAA including elective and ruptured comparing to papers reporting only RTHAA (33% versus 47%).

The former group of papers had results that are comparable with mortality rate of open repair of ruptured abdominal aortic aneurysm (RAAA) which is, no matter how difficult still, far easier clinical condition in comparison to RTHAA².

Results are improving over the decades. It might be explained with centralization of care of patients with THAA. Cowan et al.³ reported higher incidence of mortality in low volume centers and proposed centralization of THAA repair which ten years later probably proved to have half reduced mortality. In all twelve studies, from this systematic review, that are reporting data for both intact and ruptured THAA, rate of ruptured aneurysms was less than 10%.^{3,4} Among others reporting only RTHAA, results from the literature are demonstrating that they are high volume centers as well with 660 patients in 20 years in Zanetti group and 675 in Gaudino group. Another reason for better results might be higher turnaround rate. In 1999 report from Bradbury et al. suggested that patients in shock and type II RTHAA have very poor prognosis so all treatment efforts are questionable while others should be transferred to high volume centers⁵. We might speculate that such a strategy has led to selection of those patients with better prognosis. Even the high volume centers are not reporting turnaround rate in this group of patients. From experience in RAAA we know that turnaround rate can be even 50%.⁶

Finally and most importantly surgical techniques changed and this is what has significantly improved results. Improved

intraoperative organ perfusion, neurological monitoring and methods of preventions of spinal cord and kidney ischemia are nowadays milestones of successful open repair of THAA even more important in ruptured cases. Such a complex techniques and expensive technologies performed by well-educated and experienced physicians in multidisciplinary teams are possible only in centers of excellence.

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