Correspondence


Dear Editor,

In this very interesting paper, the authors qualified in a computational fluid dynamics study how central hemodynamics are affected by woven Dacron grafts while inserted in the ascending or descending aorta.

Conventional aortic surgery remains the gold standard for diseases of the ascending thoracic aorta, while descending aorta pathology treatment shifts toward endovascular surgery. In cases of acute complicated type B dissection or aneurysms, the insertion of endovascular grafts in the descending thoracic aorta (DTA) is a lifesaving procedure that can be characterized of little hemodynamic impact, considering the severity of the underlying disease.

But what really happens in a young, otherwise healthy aorta torn in a car accident and receiving a stiff endovascular graft that should be carried for a lifelong period? There is evidence from clinical studies in humans that conventional grafts influence central arterial stiffness. The same phenomenon is frequently noted when DTA endovascular grafts are implanted in experimental animal models or humans. A series of young adults already studied, revealed affected hemodynamics (increased pulse pressure, systolic blood pressure and pulse wave velocity) in vivo, after endovascular aortic graft implantation in their DTA.3

A tailored computational analysis focused on the commercially available endografts could provide clues as for the mechanisms underlying the hemodynamic alterations recorded in vivo.

References


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Dear Editor,

We would like to thank the authors of the letter for their pertinent comments on the hemodynamic effects of aortic grafts. We fully agree with their positions and clinical perspective. We grasp the opportunity to stress once again the fact that the mechanisms by which grafts placed in ascending or descending aorta contribute to pulse pressure augmentation, are quite different. Grafts in the ascending aorta augment principally the amplitude of the forward running waves coming from the ejecting heart, whereas grafts in the descending or thoracic aorta augment the amplitude of the reflected waves.

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DOI of original article: 10.1016/j.ejvs.2011.10.025.
Letter to Editor Re “Differential Protein Expression in Serum of Abdominal Aortic Aneurysm Patients – A Proteomic Approach”

Dear Editor,

In their paper “Differential expression in serum of abdominal aortic aneurysm patients – A proteomic approach”, Pulinx et al. reported elevated factor XII and α-1 antitrypsin levels in the serum of patients with progressive aneurysms, but found these proteins to have little ability to predict aneurysm progression above the established marker, AAA diameter.

I propose that the authors were never likely to discover a putative biomarker using this technique. DIGE has been utilised by many years, and although it has provided insight into disease pathogenesis, it has failed to discover a biomarker translatable to clinical practice. 2

DIGE has been utilised by scientists across medicine and vascular surgery [including our group] for many years, and although it has provided insight into disease pathogenesis, it has failed to discover a biomarker translatable to clinical practice. 2

Serum is an unstable sensitive protein preparation, which can modify depending on harvest factors including time-of-day, ambient temperature, current health, sex, and age, all factors which have not been controlled for in this study. 2 Given this principle flaw, and the most significant finding being increased expression of ubiquitous Albumin in patients with large AAAs [P = 0.007], the results must be interpreted with caution.

I do acknowledge the authors correct closing comments that “further research, with larger sample sizes” are appropriate. It should be emphasised that this should be in the form of a multicentre, prospective, protocol driven study using blood plasma [a more stable protein suspension]. The analysis should utilise high-throughput proteomic techniques obviating the potential confounders caused by protein fractionation and enrichment that limit DIGE.

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