Illuminating the Fog that Surrounds Chimney Grafts

Commentary on: Triple-Barrel Graft as a Novel Strategy to Preserve Supra-Aortic Branches in Arch-TEVAR Procedures

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The use of chimney, snorkel, sandwich or periscope grafts in the visceral and arch of the aorta has always concerned us greatly. The fact remains that aortic stent-grafts were simply never intended to be used in this way. The technique was first described to salvage a potentially catastrophic unexpected intra-operative complication, and yet it seems to be creeping unchecked and inexcusably in to everyday practice, with little long term data to support its use.

Dr Shahverdyan and colleagues in this edition of the journal have reported their experience using a double chimney technique in the aortic arch and have systematically reviewed the literature. There can be no doubt that the Cologne group of patients were extremely complex and that other interventional options were limited. However, even in the most expert hands the outcomes presented should make us all stop and question whether any form of intervention is really appropriate in this population, not least an experimental one. By six months four of six patients were either dead or had had effectively untreated (type Ia endoleak) aneurysms and another was paraplegic. These results were accomplished at significant cost and morbidity; average length of hospital stay was over three weeks and 50% required secondary interventions within 30 days.

Others have reported apparently better results. But as the authors allude, an objective comparison and analysis of the data is difficult because few studies ever utilise standardised reporting criteria.

Pioneers of the chimney technique have attempted to understand its limitations and have probably improved rates of immediate technical success. However, we remain sceptical over the long-term durability of this approach and believe that for most patients other options exist. In some cases this will include best medical therapy.

Endovascular practice must be judged by mid and long term outcomes. It remains relatively common for new, supposedly innovative, techniques to be introduced into endovascular practice with reasonable peri-operative mortality rates. This is due to the minimally invasive nature of the intervention. However, new techniques must be evaluated appropriately using methodology identified in the IDEAL consensus. Long term efficacy must be described before these techniques are introduced as a standard of care.

REFERENCES