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The Surgeons Take Back Control

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Why do we increasingly witness surgeons creating their own fenestrations for the aortic arch? Global experience with total endovascular aortic arch repair is expanding. Thus far, devices have been manufactured by companies to suit the anatomy of the arch and supra-aortic vessels. Significant progress has been made, particularly in terms of bridge stents and deployment techniques.

The technique, however, presents numerous pitfalls. The time delay to obtain the grafts prevents its use in emergency cases. Privileged relationships between companies and highly selected surgeons and institutions limit its widespread adoption, which is detrimental for ordinary patients.

Given the complexity of this technique, it is unsurprising that the worldwide reported experience over a 17 year period involves fewer than 300 patients, averaging fewer than 30 cases per year, which falls short of meeting demand. ¹ Furthermore, the results are disputable, with a relatively high stroke rate.¹ Complex procedures are associated with prolonged operation durations and complications; complex grafts also incur high costs.

Simplicity is the key to progress. We have moved away from an era in which pioneers like Dake² or Mialhe³ determined the optimal stent graft designs, to one that is within the reach of a larger cohort of surgeons. We are also currently distant from the vision of transcatheter aortic valve implantation; cardiologists such as Cribier,⁴ for instance, envisioned a future in which the technique would be accessible to more cardiologists. This vision led to the remarkable widespread adoption of this revolutionary yet straightforward approach.

Endovascular repair with a physician modified endograft is a relatively simple and rapid procedure that overcomes many pitfalls associated with the custom made stent grafts mentioned earlier. Favourable results are reported in this issue of European Journal of Vascular and Endovascular Surgery by Wen et al.,⁵ who treated 54 patients for aortic arch lesions. They achieved an excellent technical success rate of 98%, a stroke rate of 7%, and a 30 day mortality rate of 3.7%. This study confirms our own experience with 74 patients, with a midterm follow up of three years.⁶

Surgeons engaged in large scale activities are asserting their knowledge and expertise, leading to a shift towards acknowledging their input and insights. Through this technique, vascular surgeons will autonomously refine their strategies, optimise intervention timing, and decrease healthcare expenditure. Most importantly, there is no doubt that patients will benefit from a simplified and expedited procedure.

It is imperative for surgeons to regain control over medical innovations for endovascular treatment of the aorta.

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