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Abdominal aortic aneurysm repair in advanced age: is age really the problem?

G.K. Ambler^{1,2}, C.P. Twine^{1,2}

¹ Centre for Surgical Research, University of Bristol, Bristol, United Kingdom

² Department of Vascular Surgery, North Bristol NHS Trust, Bristol, United Kingdom

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Corresponding Author:

G.K. Ambler

Centre for Surgical Research, University of Bristol, Bristol, United Kingdom

Email: graeme.ambler@bristol.ac.uk

Telephone: +44 (0) 117 3313929

In line with population ageing, vascular specialists are seeing more patients of advanced age. Treating them has never been easier as techniques and technology improve. The question of how we make the shared decision for treatment with an octogenarian is the real problem; and the study by Alberga et al goes some way towards helping us with that for patients with AAA.¹

Using rigorous statistical analysis of a large patient registry, Alberga et al. found that AAA repair is a high-risk surgical procedure in octogenarians. Even in the elective setting, they found a perioperative mortality rate of 1.4% for EVAR and 9.3% for open surgical repair; and major morbidity rates of 12% and 28% respectively. The vast majority (88%) of octogenarians in the study had at least one major comorbidity, and mortality rates were even higher when considering only patients with cardiac, respiratory or renal comorbidities. This is helpful for the clinic discussion, especially bearing in mind that online actuarial life tables tell us that life expectancy is less than 5 years for an 80-year-old with major comorbidity.

There is an ongoing argument in the literature about the value of age as an independent predictor of outcome after surgery. This has led to claims of doctors being ageist for 'refusing' older people treatment, which has spilled out into the international press.² Studies such as Alberga et al. have shown advancing age to be an independent predictor of outcome and argue against this rhetoric. However, others have shown that age is not an independent predictor of outcome after surgery, and that frailty is more important.³⁻⁵ Frailty is a poorly defined term which incorporates both functional capacity and comorbidity, so can be difficult to capture in registries. This is why it tends to be missing from retrospective analyses such as this one. This is a shame, as this study would be more definitive if frailty could be used to adjust the data. There are recent moves towards capturing it in registries, with the National Vascular registry in the UK now including a component on frailty. Results from 2020 suggested that, perhaps unsurprisingly, patients undergoing EVAR were over twice as likely to be frail as patients undergoing open surgery (37% vs. 15%).⁶

So where does this leave us for the over 80-year-old with an AAA in our clinic? It is fair to summarise that being over 80 puts you in a higher risk group for AAA repair. But this study cannot conclusively prove that age alone is an independent risk factor until frailty can be adjusted for within analyses. Resetting treatment thresholds to a larger AAA size in this group is also unlikely to be helpful, as this study, as well as many others, have found worsening morbidity and mortality with increasing AAA size.⁷

This means that clinical judgement on comorbidity and frailty remains paramount, and that the perioperative risk of age alone should not be overplayed to such patients while choosing a treatment pathway which best aligns with their values.

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