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INVITED COMMENTARY

Outcomes for Intact Abdominal Aortic Aneurysm Repair: What to do With Frailty and Quality of Life?

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In their paper, Boyle *et al.* combined the data from more than 100 000 patients from 11 registries in Europe, Australia, and the USA, and reported the outcomes of elective abdominal aortic aneurysm repair.¹ Results were compared for age, sex, and country over two time periods (2010 – 2013 and 2014 – 2016). A small but reassuring reduction in peri-operative mortality for open (from 4.2% to 3.6%) and endovascular repair (EVAR; from 1.0% to 0.7%) was demonstrated over time.¹

Despite the publication of the European Society for Vascular Surgery guidelines in 2019,² the study showed considerable practice variation between countries. The proportion of patients treated by EVAR varied from 35% to 81%, and higher mortality rates were associated with open repair. It seems worthwhile to focus most of our energy on gaining insights into how countries with a low proportion of EVAR repairs can be helped and trained to improve in this field.

Other significant findings were increased mortality rates in women vs. men (3.0% vs 1.6%) and octogenarians vs. those aged <80 years (2.7% vs 1.6%). While 23% of patients were aged ≥80 years, they constituted 46% of deaths after EVAR. The proportion of octogenarians ranged from 10% to 29% between countries. Further improvements and research should focus on these patient groups.

Unfortunately, on close inspection, the paper highlights the problems with registries, registry data, and combining data from different registries. Among participating registries in the International Consortium of Vascular Registries (ICVR), data are not always collected on all patients or in a standardised fashion, with many granular details missing. Many countries with advanced healthcare systems do not even participate in the ICVR. This makes deeper dives into some important determinants of endovascular and open aneurysm repair outcomes virtually impossible with ICVR data.

For example, patient frailty overall deserves more attention as it is demonstrated to increase mortality, complication rates, unexpected re-admissions, and discharge to a nursing home.³ Up to 21% of non-frail patients aged >65 years become frail after elective vascular surgery.⁴ Although it is generally

accepted that a significant proportion of vascular surgical patients are frail, objective scoring of frailty and effectively using these scores in shared decision making is not yet common practice.³ Better insight into frailty and its impact on the risks and benefits of treatment options will help tailor interventions to individual patients, even if this means that it would be better not to operate at all in specific cases. It seems worthwhile to apply the outpatient geriatric assessment, which has been developed by our oncological surgical colleagues to facilitate a better weighted decision making process.⁵ While the study by Boyle *et al.* focused mainly on peri-operative mortality, aspects of quality of life are equally important when assessing overall quality of care. This will probably not be evaluable with the limited granularity of ICVR data.

It can be concluded that the overall results of intact abdominal aneurysm repair are good. However, mortality is not the only outcome to focus on. In the future, quality of life and weighted decision making should be incorporated in our consulting rooms, manuscripts, and international guidelines. For this to happen with registry data, coordination between registries needs to improve at the design phase with the identification of questions to be addressed prior to their implementation. This will allow proper data to be collected uniformly, with data fitting the question asked rather than just fitting questions to the available data.

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