Comment on Rehman *et al*. "Short-Term Outcomes of Elective Abdominal Aortic Aneurysm Repair"

Sir,

Rehman *et al*. have presented a compelling study providing crucial insights into elective open abdominal aortic aneurysm (AAA) repair from a tertiary care centre from Pakistan.[1] Their research provides a nidus in better understanding the current landscape of aneurysmal disease and furthering the knowledge about preventive and vascular care. As highlighted by the authors, there is limited literature on AAA care and outcomes from low-middle-income countries (LMICs), which hinders the development of guidelines and standardised metrics in these settings. Nevertheless, the reported findings are instrumental in understanding the present state of care and provide comparison to high-resource settings.

Noteworthy is the under-utilisation of endovascular aortic repairs (EVARs) over the past two decades, despite it being the preferable approach for AAA repairs. This could be linked to constraints in the available resources, and endovascular-trained professionals and technicians, or the absence of a robust surveillance systems if EVARs were indeed performed. The rapid increase in EVARs over the years is a representation of safe technology which was not seen adopted at large across the world, notably in the US and may still be a major leap for AAA care in LMICs.[2]

Another striking observation in the study was comparatively younger mean age of 63.8 ± 12.6 years, in contrast to the average age of 73 years observed in the US for open AAA repair patients.[2] This age difference may be linked to a lack of preventive care, particularly efforts targeting hypertension control and smoking reduction prevalent factors in the patient population. Since AAA screening in the US starts at 65 years with patients consuming tobacco, it raises the concern that patients undergoing open repairs in Pakistan might not be identified if the US Preventive Services Task Force Recommendation was adhered to.[3]

Furthermore, the average AAA diameter at the repair time, measured at 8±2.73 cm, exceeds manifold beyond the threshold associated with a 30-50% risk of rupture within a year. This highlights a structural failure in the health system's ability to assess patients' risk of poor outcomes.[4] This study directs vascular surgeons and researchers to have a more in-depth understanding of AAA's surgical epidemiology in Pakistan and learn about the variations in care and management from current knowledge which is largely generated from developed countries. An integrated care with primary care physicians for early medical management, smoking cessation programs, and AAA diagnosis following prompt vascular consults can be a step forward to providing comprehensive vascular care. Curating a nationwide registry, designing a quality improvement program and importantly, engagement of government agencies to fund research and providing endovascular care would be few of the next steps in AAA management.

COMPETING INTEREST:
The author declared no conflict of interest.

AUTHOR'S CONTRIBUTION:
Conception and drafting.

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AUTHOR'S REPLY:

Thank you so much for taking interest in this article and for sharing your valuable and pertinent comments.

Yes, we fully agree that endovascular repair is the most frequent treatment modality offered to most of the patients with AAA requiring interventions in the developed world.[1,2] The situation is different in the developing world where we face

immense issues of the cost and stent-grafts availability. The good thing is that awareness is increasing and there are more of trained people who can perform these procedures, especially the standard EVAR. We always discuss the option of EVAR with the patient during the process of informed consent. In our centre, although we have fully trained persons who can perform EVARs, there were only 2 EVARs done in last 5 years. One patient waited more than 18 months for the delivery of stent-graft for his aneurysm repair. In this patient, this prolonged delay was due to the disrupted supply chain in COVID-19 pandemic. The low number of aortic aneurysm repairs is also due to lack of screening programs in the country. Most patients present as symptomatic AAAs. It is also highlighted from the study data that most patients presented were having symptomatic aneurysms with mean aneurysm size of 8.3 cm.[3] Offering a national screening program can detect AAAs at an earlier age and potentially improve survival in this patient population. This has been proven well from the many aortic aneurysm screening programs.[4]

The other important point highlighted by the worthy reader is the relatively younger mean age of the patients (average age: 63.8 ± 12.6 years) presenting in LMICs undergoing aortic aneurysm repairs compared to the West (where the average age is 73 years).[5] This underscores the necessity to revise and upgrade our primary healthcare and improve risk factor modification at the national level. I fully agree that it is a high time to work on developing nationwide registry, a national screening programme, and designing a quality improvement program. This would not be possible without active engagement of government agencies to allocate resources for research in this direction. I again thank you for your very valuable comments.

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