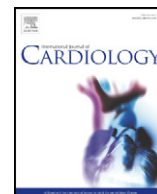




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Short communication

International opinion on priorities in research for small abdominal aortic aneurysms and the potential path for research to impact clinical management



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1. Introduction

Landmark trials of surgery for small abdominal aortic aneurysms (AAA), which included patients with AAA sizes between 40 and 55 mm, did not demonstrate medium term survival benefits of early surgery in these patients [1]. However, these trials also showed the variation in AAA growth rates between individuals, and that the majority of patients with small AAAs would eventually progress to the threshold of 55 mm within 5 years.

In the ensuing decades since these trials, we have witnessed changes in the epidemiology of AAA. Patients are being diagnosed with AAAs at an increasingly older age [2]. The operative risk for AAA surgery has also improved internationally according to the data from large registries [3,4]. It is therefore a logical hypothesis that those patients with expected fast future growth of AAA may benefit from early surgery before they reach the 55 mm threshold. Although several putative markers of AAA progression have been reported, none has yet been validated for use in clinical practice [5,6]. More research will be required to advance knowledge in this specific arena.

Given the finite research resources available, it is imperative for researchers to demonstrate the need for specific research, and a clear path to translate their findings to impact clinical practice. Initiatives

such as the James Lind Alliance utilise consultation with clinicians and their patients to determine disease conditions that are considered priorities for research [7]. However, there is no existing literature to highlight priorities for research in the subject of AAA. To address this, we conducted an online survey to vascular surgery colleagues internationally to obtain a global opinion on the priorities for research for AAA.

2. Method

This online survey was constructed using Google Forms, and was delivered in two phases. The first phase was during the European Society of Vascular and Endovascular Surgery Annual Conference 2016 (Copenhagen), where we distributed 1500 copies of invitation flyers at the conference. The second phase was conducted during November 2016 and April 2017 as an online campaign. During this period, the lead Author utilised LinkedIn to randomly connect with ~2000 vascular surgery colleagues internationally and invited each person via an email. The active link for the online survey is: <http://tinyurl.com/OxAAASurveyInternational> ("e-supplemental material"). Further details of the survey workflow can be found in the accompanying Data in Brief article [17].

In this survey, colleagues were asked to provide basic demographic details. We first asked them to choose what they view as the top priority for AAA research out of a list of 10 broad research areas (Fig. 2). A brief outline then highlighted the current epidemiologic data of patients with AAAs, including the increased chance of developing other cardiovascular co-morbidities while under surveillance as compared to those without AAAs [8,9]. We quoted contemporary surgical outcome data [$<2\%$ mortality for routine open surgical repair (OSR), $<0.5\%$ mortality for endovascular repair (EVAR)] [3,4], routine recovery time and long term follow up plans for surgery. We then presented them with a hypothetical scenario where they had just been diagnosed with a small AAA (40 mm). In addition, a hypothetical biomarker predicted their AAA will be faster growing, and would likely to reach existing surgical threshold within the next 3–5 years. The participants were told they were fit to undergo either OSR or EVAR. Using this scenario, we ascertained their preferences regarding several aspects for the clinical management.

3. Results

By the end of April 2017, we received 277 online responses from vascular/endovascular surgery colleagues who have direct roles in the management of AAA patients. The median age group was 41–45 years, with a majority being male ($n = 245$). There were participants from every continent: Africa 3%, Asia 2%, Australasia 5%, Europe 54%, Middle East 3%, North America 14%, and South America 21% (Fig. 1). In terms of their professional profiles, 78% were consultant specialists, 18% were specialist trainees, and 4% were junior doctors. Sixty eight percent worked predominantly in the public sector.

Amongst the 10 topics of research for AAA, "discovering new tests to predict an AAA will be fast growing" and "discovering new medications

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