Response to ‘Re. Spontaneous Delayed Sealing in Selected Patients with a Primary Type-Ia Endoleak After Endovascular Aneurysm Repair’

We have become dependent on imaging to define the need for and timing of interventions after EVAR. Imaging, however, is not without limitations and patients at persistent risk of rupture may frequently be misidentified. Intermittent or position dependent type-I endoleaks are a good example of the situation where absence of endoleak on CTA may not be a perfect surrogate of success.

In another publication, it was found that effective sealing in heavily thrombotic necks is possible as neck remodelling results in thrombus dissolution and complete graft-wall apposition in the mid-term. This occurred without any additional risk of rupture. However in the present study, the authors believe that thrombosis was not the reason why the primary endoleaks sealed spontaneously.

The appropriate interpretation is different. Much has changed in the technology, planning and execution of EVAR since the consensus publication of 2002. In the case of appropriate evaluation of neck suitability, correct sizing and implantation, and consequently optimal sealing of the proximal endograft, immediate type-Ia endoleaks are most likely transitory. A watchful waiting period may be preferable to an aggressive strategy directed at immediate repair. In contrast to what is suggested, the authors defend the position that an unnecessary obsession with intra-operative correction of the picture may well result in the loss of a life.

REFERENCES

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Re: ‘Long-term Outcomes and Sac Volume Shrinkage after Endovascular Popliteal Artery Aneurysm Repair (EVPAR)’

I read the article by Piazza et al.1 with interest, as it seems clear that endovascular exclusion of popliteal artery aneurysms (PAAs) is here to stay. There are a few issues to be considered, though.

Firstly, the suggested 20-mm threshold may be obsolescent given that papers recommend a wait-and-watch policy up to a 30-mm threshold, other considerations being thrombus burden, distal embolization, inflow, and outflow vessel angulation.

Secondly, the authors indeed highlight the fact that less than three-vessel runoff is acceptable, an important issue that some surgeons think is a contraindication, and this is a welcome point. They indicate that they never deploy below the knee joint: the radiological knee joint and the actual line of knee flexion are two completely different areas. If their endografts all landed down to the radiological joint then the graft is still across the line of knee flexion, which is actually the inter-epicondylar line. We readily land the distal end of endografts into the below-knee popliteal arterial segment ("P3") leaving enough for salvage bypass. As they are treating small PAAs then they likely gain the luxury of a distal neck, probably above the knee joint/flexion line ("P2"). They say nothing about their endovascular strategy for a large PAA that still has a good P3 segment to land in. However, complete deployment above the knee may lend itself to EVPAR even in younger, more active patients, something to consider in the future.

Thirdly, while they effectively summarize that their first line is open surgical repair (OSR), issues like age and lifestyle are not commented on older, sedentary patients in whom our first approach would be EVPAR as a default, including synchronous bilateral approaches.

At our centre, we have had experience with both flow-modulator stents5 and heparin-bonded endoprostheses (Viabahn, WL Gore & Associates, Inc., Medical Products Division, Flagstaff, AZ, USA) in the femoropopliteal segment in about 30 patients in the last 4 years, with results in the later group as promising as the authors suggest. Surveillance ought to be continued for at least 5 years if not indefinitely, given specific device issues in that they lack barb fixation (as opposed to AAA endografts) and are subject to the extreme stresses that are a default of the
Correspondence

2 Galland RB, Magee TR. Popliteal aneurysms: distortion and size suggesting patency is length-related do not apply.6 The Via-bahn is quite kink-resistant even at 90-degree knee flexion, but we certainly advise patients to avoid prolonged periods of hyperflexion, for example kneeling for a long time. Delayed PAA rupture as is known with OSR, is also not reported.7

The key messages from the paper of course are that EVPAR is technically successful from both deployment and patency aspects, and the shrinkage aspects demonstrated are indeed promising. However, it would still seem that the authors are being rather overselective in terms of how far they extend the endografts from an anatomical standpoint, and in whom they extend EVPAR to.

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Re: ‘Re. Long-term Outcomes and Sac Volume Shrinkage After Endovascular Popliteal Artery Aneurysm Repair’

We would like to thank the author of the letter for his comments regarding our manuscript. We agree that the threshold for popliteal artery aneurysm (PAA) treatment from 2 cm in maximum diameter may still be controversial, but not an obsolescent issue; in 2011, a specific Trans-Atlantic debate on the appropriate management of small asymptomatic PAA (<3 cm),3 still found authors in favor of repair. Recently Vrijenhoek et al.4 pointed to the important clinical consequences of small PAA. Other than that, we want to clarify that our study is not conducted on small PAA; as described in the text, the mean PAA diameter is 3.3 ± 0.78 (range 2.0—5.7) with 85% of cases ≥3 cm (only 7 out of 46 cases between 2 and 3 cm).

Regarding distal runoff, we have developed our policy over 15 years.5 Even if the primary choice is to have three-vessel runoff, in a few selected cases at high surgical risk (n = 2, 4%), we pushed the indication to one native tibial vessel with no disease and valid runoff at the foot. This last aspect is, in our opinion, as important as the number of patent tibial vessels. However, in cases with poor runoff, the gold standard is open surgery.

We never stated throughout the text that we “never deploy below the knee joint”; all our endografts were in the below-knee popliteal artery (Table 3 in the original article). We said that “landing distally at the level of the knee joint was always avoided”; thus meaning that our distal landing zone was never in the point of knee flexion and that the endograft distal landing zone always extended beyond that point in the below-knee popliteal artery.

Concerning patient selection, we avoid an endovascular approach in young patients (<50 years) or those with an active lifestyle (sports, gardening, activities requiring prolonged periods of knee hyperflexion); in older and sedentary patients we prefer an open approach if they are not high risk, have good saphenous vein or have poor runoff; if not, we prefer an endovascular approach in association to adequate antiplatelet therapy.

The aim of this study was evaluate patency and efficacy of EVPAR on aneurysm sac exclusion over the long term; the satisfactory results obtained by this series are an expression, in our opinion, not of patient overselection, but of a careful evaluation of different issues to be considered in patient selection between open and endovascular repair during daily practice.

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