CORRESPONDENCE


Sir,

In the above article, the authors compared open vascular surgery (OS) with endovascular surgery (ES) in octogenarians with critical limb ischemia with respect to (a) primary patency of the arterial reconstruction, (b) limb salvage, (c) postoperative autonomy, and (d) survival. Mean follow-up was 33 months. ES was found to be superior to OS with respect to autonomy, while the other parameters showed no relevant differences between both groups.

However, in our opinion, the conclusion “ES is the better treatment option for octogenarians” is not justified due to the following reasons:

1. The percentage of diabetic patients was approx. 50% in both groups. According to actual guidelines,1 PAD patients with and without diabetes should not be combined in clinical studies, since their clinical symptoms (blunted pain perception in the presence of neuropathy), and the morphological distribution of PAD are different. Older subjects with diabetes are often unaware of having distal sensorimotor polyneuropathy.2
2. Patients with rest pain and tissue loss should be analyzed strictly independently, since all common outcome parameters of arterial revascularisation are worse when tissue loss is present.3,4 Respective subgroup analyses are missing in the above paper.
3. OS and ES patients differed with respect to the degree and complexity of arterial occlusions. According to TASC, the majority of OS patients had complex C and D lesions, while ES patients had predominantly A and B lesions. Comparing outcomes of the two treatment options without respecting the morphology of the arterial lesions is like comparing apples and oranges!

REFERENCES


G. Rümenapf, S. Morbach
Speyer, Germany
*Corresponding author.
Email-address: gerhard.ruemenapf@diakonissen.de (G. Rümenapf)

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We thank Dr Rümenapf and Dr Morbach for their comments and would like to answer these comments at the light of additional data to argue our point of view.

REASON 1

It’s absolutely true that it is recommended not to combine diabetic and non-diabetic PAD patients in clinical studies, since their clinical symptoms and the morphological distribution of PAD are different. However, we decided to include both diabetic and non-diabetic PAD patients in this study for several following reasons.

First, Lepantalo study did not specifically involve octogenarians. We believe that diabetic octogenarians have to be primarily considered as octogenarians, and not as diabetic patients. Outcomes in terms of autonomy are not the same for octogenarians than for younger patients, diabetic or not.

Second, this allowed a larger population, because the number of octogenarians undergoing infra-inguinal surgery for critical limb ischemia is not necessarily high.

Third, because clinical symptoms (blunted pain perception in the presence of neuropathy) can be different in diabetic PAD patients, we defined as primary endpoint in this study not the symptoms resolution, but the patient’s level of autonomy following revascularisation.

We also performed a multivariate analysis, and in our study the presence of diabetes did not influence the autonomy level.

Finally, to enlighten our point of view, we compared diabetic and non-diabetic patients for different risk factors and comorbidities and failed to find out significant differences (Table 1).
Table 1. Statistical comparison between diabetic and non-diabetic patients. Additional data.

| Risk factors | Diabetic patients | Non-diabetic patients | p  
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Smoking history</td>
<td>n = 23 (28.4%)</td>
<td>n = 14 (24.1%)</td>
<td>NS</td>
</tr>
<tr>
<td>Hypertension</td>
<td>n = 79 (97.5%)</td>
<td>n = 79 (91.9%)</td>
<td>NS</td>
</tr>
<tr>
<td>Dyslipidemia</td>
<td>n = 45 (55.6%)</td>
<td>n = 50 (58.1%)</td>
<td>NS</td>
</tr>
<tr>
<td>Obesity</td>
<td>n = 32 (39.5%)</td>
<td>n = 29 (33.7%)</td>
<td>NS</td>
</tr>
<tr>
<td>Cardiac</td>
<td>n = 62 (76.5%)</td>
<td>n = 56 (65.1%)</td>
<td>NS</td>
</tr>
<tr>
<td>Renal</td>
<td>n = 20 (24.7%)</td>
<td>n = 17 (19.8%)</td>
<td>NS</td>
</tr>
<tr>
<td>Cerebral</td>
<td>n = 10 (12.3%)</td>
<td>n = 12 (13.9%)</td>
<td>NS</td>
</tr>
</tbody>
</table>

Reason 2

It is clear that patients presenting with rest pain should not be considered as the same as patients with tissue loss, because outcomes of revascularization are worse when tissue loss is present. We wanted to include all patients in order to have a representative and larger population. We did subgroup analyses, but only for patients with tissue loss, because the proportion of patients with rest pain is too small (20 patients in OS, and 9 patients in ES) and does not allowed statistical analysis.

There were no difference between both groups (patients presenting with tissue loss undergoing OS in comparison to patients with tissue loss undergoing ES) in terms of survival, limb salvage, and primary patency (Figs. 1–3).

For patients with tissue loss, OS patients either remained at their previous level of autonomy, or lost autonomy. ES patients either remained at their previous level of autonomy, or gained autonomy. There was an improvement of 30-day and 6-month postoperative autonomy level for patients who underwent ES compared to those who underwent OS.

Reason 3

It is sure that OS and ES patients differed with respect to the degree and complexity of arterial occlusion. The aim of this study was to compare autonomy recovery and not to compare OS and ES surgery. We did not take into account the morphology of the arterial lesions, but both groups were comparable in terms of demographic data, cardiovascular risk factors, symptoms and comorbidities, with comparable primary patency and limb salvage rates. However, ES group showed an improvement of the postoperative level of autonomy. Thus, we believe that endovascular surgery should be offered, whenever possible, to octogenarians as recommended by the Helsinki’s team.¹

Sincerely,
REFERENCE


A. Lejay, N. Chakfe*
Les Hôpitaux Universitaires de Strasbourg,
Vascular Surgery, 1, Place de l’Hôpital, BP426,
67091 Strasbourg, Cedex, France

*Corresponding author. Tel.: +33 369550888;
fax: +33 369551783.
Email-address: nabil.chakfe@chru-strasbourg.fr (N. Chakfe)

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