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Editorial comments

New 2024 European Society of Cardiology guidelines on peripheral arterial and aortic diseases: Will they change our clinical practice in France?

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In contrast to previous versions, the European Society of Cardiology (ESC) decided to merge the 2024 guidelines for peripheral arterial and aortic diseases (PAAD) in a single manuscript, providing a more focused document on all extracardiac vascular diseases [1]. We highlight here the main new points that may affect or consolidate our practice in France. The grades of some recommendations are presented in parentheses.

At the carotid level, screening for extracranial internal carotid artery lesions is frequently requested in our country in patients at risk. In accordance with the European Society of Vascular Surgery (ESVS) 2023 guidelines, the ESC proposes a low-level recommendation (IIb-C) in patients with two or more cardiovascular risk factors [2]. This relatively weak recommendation relates to the limited prevalence of carotid stenosis ≥ 60%, and to the risk of unnecessary intervention in case of routine population screening. However, one should remember that carotid atherosclerosis is a strong marker of the risk of cardiovascular events even below 60% stenosis, and the identification of significant plaques may modify the risk estimation [3]. Regarding carotid stenosis assessment, the 2024 guidelines reinforce the role of duplex ultrasound as the first-line imaging technique, over computed tomography angiography or magnetic resonance angiography. The guidelines recognize the North American Symptomatic Carotid Endarterectomy Trial (NASCET) method or its non-invasive equivalent method as the reference method for stenosis quantification; the European Carotid Surgery Trial (ECST) method is no longer recommended. Optimal medical therapy is strongly recommended for all patients. In asymptomatic patients with 60–99% stenosis, and after individual risk assessment by a vascular and neurology team, revascularization should be considered if high-risk features are present (IIa-B). Carotid endarterectomy remains the first choice, with stenting being an alternative in high-risk patients (IIb-B). In symptomatic patients not undergoing revascularization, dual antiplatelet therapy with low-dose aspirin and clopidogrel is recommended for the first 3 weeks up to 3 months after the neurological event, followed by single antiplatelet therapy (clopidogrel or aspirin). In symptomatic patients, carotid endarterectomy is highly recommended within 14 days in patients with 70–99% stenosis (I-A), and should be considered for 50–69% stenosis (IIa-A). Carotid stenting should be considered in high-risk patients, and may be an alternative in patients aged < 70 years (IIb-A). After revascularization with stents, dual antiplatelet therapy is recommended for at least 1 month (I-A), with single antiplatelet therapy being recommended in the long term (I-B).

At the aortic level, abdominal aorta aneurysm (AAA) is the most frequent location for aneurysms. A diameter ≥ 30 mm is generally used to define an AAA using the outer-to-outer method, taken along the vessel's axis, and the aorta should be positioned longitudinally if tortuous. The prevalence of AAA has decreased over the past 20 years, attributed to the decline in smoking and better control of cardiovascular risk factors. Whereas no national AAA screening programme is established in our country, several countries propose this screening. However, the most recent national screening programmes in men aged ≥ 65 years in Sweden and the UK reported a prevalence below 1% [4,5]. Considering the lower prevalence of the disease nowadays, the ESC recommends ultrasound AAA screening in men aged ≥ 65 years with a history of smoking (I-A). Screening may be considered in men aged ≥ 75 years, irrespective of smoking, and in women aged ≥ 75 years if current smokers or hypertensive (IIb-C). Family screening is also recommended for first-degree relatives aged ≥ 50 years of patients with AAA. This is more restrictive than the ESVS guidelines, which recommend AAA screening in a larger population, particularly all men ≥ aged 65 years, former smokers, men and women with first-degree relatives with AAA and in case of other peripheral aneurysms [5]. In the ESC guidelines, screening can also be considered opportunistically in men aged ≥ 65 years and women aged ≥ 75 years, particularly during transthoracic echocardiography, according to the French E2T3A (*Échocardiographie trans-thoracique et anévrysme de l'aorte abdom-*

Abbreviations: AAA, abdominal aorta aneurysm; EACTS, European Association of Cardio-thoracic Surgery; ESC, European Society of Cardiology; ESVS, European Society of Vascular Surgery; PAAD, peripheral arterial and aortic diseases.

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inale) study [6]. Finally, the ESC recommends assessment of the entire aorta once an aneurysm is identified at any location (I-C).

Regarding the indication for elective intervention, whereas the AAA diameter of 55 mm is maintained in men, a threshold of 50 mm is now strongly recommended in women (I-A), based on the facts that aorta diameters are smaller in women and, in case of AAA, rupture risk is 4-fold higher in women than in men with the same diameter. This practice is already common in France, consolidated now by these guidelines. For the follow-up after intervention, the endovascular option requires closer attention. The ESC guidelines place the use of contrast-enhanced ultrasound at the same level as computed tomography angiography for both the 1-month postoperative evaluation and subsequent follow-up. When performed under optimal conditions, this assessment provides fairly accurate visualization of endoleaks, even in patients with poorly echogenic endografts, where colour Doppler evaluation is often limited, and it avoids the need for nephrotoxic contrast agents. Concerns about postinjection reactions have somewhat diminished with clinical experience, although patient monitoring after injection is still advised on the Vidal reference site; outpatient administration is now permitted. The contrast agent used for this indication in France has been reimbursed for outpatient use since 2019.

For aneurysms located at the ascending aorta, collection of family history and genetic testing/counselling is strongly advocated, and needs to be implemented more systematically. The new guidelines maintain the diameter threshold of 55 mm for surgery (I-B). However, most type A aortic dissections occur in aortic diameters < 55 mm. The risk exceeds 1% for diameters between 50 and 54 mm, with a critical point at 52–53 mm. Therefore, the guidelines propose surgery in case of dilatation of the tubular ascending aorta > 52 mm in patients at low surgical risk (IIa–B), in line with the 2024 European Association of Cardio-Thoracic Surgery (EACTS)/Society of Thoracic Surgery guidelines, which set a level of low risk when perioperative mortality is estimated at < 3% [7]. However lower diameter thresholds are proposed by both the ESC and EACTS guidelines in the presence of bicuspid aortic valve (with root phenotype) or genetic/familial elastopathies. In case of Marfan syndrome, treatment with either a beta-blocker or an angiotensin receptor blocker at maximally tolerated doses is recommended to reduce the rate of aortic dilatation (I-A). In patients with vascular Ehlers-Danlos syndrome, treatment with celiprolol should be considered (IIa-B).

Regarding the aortic dissection, it is noteworthy that the ESC guidelines follow recent guidelines from surgical societies by introducing the "non-A non-B" type, when the ascending aorta is preserved, but the aortic arch is dissected. They also introduce the TEM classification, standing for Type, Entry and Malperfusion subtypes. The guidelines present detailed algorithms for the follow-up, with aortic imaging in case of aneurysms or after intervention for large aneurysms and/or aortic dissection.

One in ten adults worldwide is affected by lower-extremities peripheral arterial disease [8]. The main points that need efforts for better implementation in our country are:

- a stronger emphasis on the use of the toe-brachial index, especially in situations when the ankle-brachial index may be misleading (e.g. diabetes);
- a more systematic indication for supervised exercise training in case of intermittent claudication, with home-based and unsupervised exercise only being alternatives (remarkably, in a recent survey conducted across 17 European countries, only 28% of vascular practitioners referred more than half of their patients to supervised exercise training [9]; in France, two thirds of practitioners do not consider home-based rehabilitation for their patients [9]);
- the introduction of the combination of low-dose rivaroxaban 2.5 mg twice daily plus aspirin 100 mg daily in non-operated patients with peripheral arterial disease at high risk of major adverse cardiovascular events, but low risk of bleeding, and after peripheral revascularization (the latter situation is the only one with national insurance reimbursement).

These guidelines maintain most indications for revascularization in case of acute limb ischaemia and chronic limb-threatening ischaemia, whereas the indication for intermittent claudication is limited to disabling cases, despite adequate exercise and medical therapy. The revascularization must always take into account the patient's co-morbidities and anatomical lesions. Although no significant changes are proposed for the revascularization of aorta-iliac arteries since the previous guidelines, endovascular therapy is now the first option, when feasible, at the femoropopliteal level, even for complex lesions, especially in patients at high surgical risk. Furthermore, these guidelines strongly recommend drug-eluting devices (either drug-eluting balloons or drug-eluting stents) as the first-line strategy (IIa-A). Regarding screening for coronary artery disease, these guidelines follow the previous ones, advocating a case-based approach.

Overall, these new guidelines reinforce the concept of the Vascular Team for the multispecialty management of patients with PAAD, with cardiologists being part of it. The number of patients managed for PAAD is considerable in France [10]. Although the practice of PAAD management by cardiologists is decreasing (with the birth of vascular medicine as a new specialty in recent years), they should remain sensitised to the possibility of concomitant PAAD in their patients, and should be involved in the cardiac assessment of these high-risk patients, whether or not in a perioperative situation.

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Disclosure of interest

The authors declare that they have no competing interest.

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