Vein bypass first vs. best endovascular treatment first revascularisation strategy for chronic limb-threatening ischaemia due to infra-popliteal disease: the BASIL-2 RCT

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Plain language summary

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Plain language summary

Atherosclerosis, or narrowing of the arteries, can occur as a result of smoking, high blood pressure, diabetes, or high cholesterol in the blood. Atherosclerosis can affect any artery, including those supplying the legs, where the condition is called peripheral arterial disease. The most severe form of peripheral arterial disease is chronic limb-threatening ischaemia which can cause severe pain in the foot as well as ulcers and gangrene. Unless the blood supply to the leg and foot is improved, by a process called revascularisation, people with chronic limb-threatening ischaemia are at high risk of amputation and death. The blood supply can be improved by using a vein from the leg to bypass around the blockages (vein bypass) or by using a balloon (angioplasty) or small metal tubes (stents) to reopen the blocked arteries (best endovascular treatment). There is debate about which type of revascularisation is best in terms of preventing amputation and death, especially in people who need revascularisation of the arteries below the knee. Bypass versus Angioplasty in Severe Ischaemia of the Leg Trial-2 is the first randomised controlled trial to compare vein bypass-first and best endovascular treatment-first in this group of patients. Bypass versus Angioplasty in Severe Ischaemia of the Leg Trial-2 found that people randomised to a vein bypass-first revascularisation strategy were 35% more likely to require a major amputation or die than those randomised to a best endovascular treatment-first strategy. Most of this difference in favour of best endovascular treatment-first was due to a higher number of patients dying in the vein bypass-first group. Best endovascular treatment-first was also cheaper for the National Health Service. The results of this study suggest that in patients with chronic limb-threatening ischaemia due to peripheral arterial disease in the arteries below the knee, who are suitable for both vein bypass and best endovascular treatment and where there is uncertainty as to which is best, best endovascular treatment should be offered first rather than vein bypass.

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