Will Butcher – Vascular Surgery

General practitioner – Frequent Questions

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My patient has a duplex which shows stenosis or occlusion in tibial vessels – is this important?



This is quite a common finding in my experience, our frequently elderly group of patients tends to get this. The usual scenario is that during workup for some sort of leg pain or swelling an arterial duplex reveals that there is some element of atherosclerosis in the tibial arteries. Understandably terms like occlusion and stenosis are very concerning for the patient and GP. There are a couple of important things to know in this area.

- In general, a single vessel to the ankle is sufficient to avoid significant risk to the foot.
- Angioplasty of the tibial vessels has a very short term patency, probably less than three months and is therefore unlikely to be a solution for a long term problem like leg pain or claudication.
- Arterial deficiency in isolation is unlikely to cause swelling of the leg.

My approach to this problem is as follows. I start with a careful examination. If there is a strong popliteal pulse it is unlikely that there will be significant ischaemia in the foot (this is a good guide but not certain). The colour and warmth of the foot is also important. A warm foot is unlikely to be ischaemic. If there are ulcers or gangrene on the foot then a distal angioplasty may improve the circulation for long enough to augment or even deliver healing. In these cases I arrange an angioplasty but warn the patient that the net benefit might not be that great. If the ulcer is on the ankle or higher rather than the foot, the contribution of distal disease is less certain, but a tibial angioplasty may improve the circulation somewhat and make compression therapy an option where it previously was not. The truth is that many patients without foot pulses but a palpable popliteal pulse will still heal a lower leg or even foot ulcer with good wound care.

In short, most patients with isolated tibial arterial disease do not require intervention. In the event that there is a non-healing ulcer I will try and improve the circulation by offering them a distal angioplasty. Importantly, angioplasty of distal arteries is very unlikely to play a role in swelling, walking distance or weakness, and the long term patency of these angioplasties is quite limited.