# Will Butcher – Vascular Surgery

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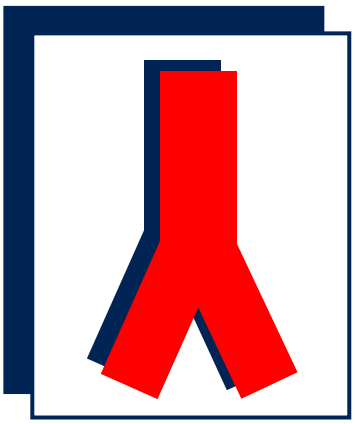

## GP Information: **Screening and Surveillance for vascular disease in General Practice**

### WHO Principles of screening

- Condition:

Must be important
Well defined and recognised pre-symptomatic stage
The natural history of the disease must be well known

- Screening test:

Must be acceptable (Inexpensive, not too invasive, simple etc)

- Treatment:

Must be available
Must provide significant advantages if managed in a pre-symptomatic time frame

- Program must be cost effective

### Peripheral arterial disease

In peripheral arterial disease, clinical examination has a sensitivity of 72%, ABPI a sensitivity of 77% and Duplex ultrasound a sensitivity of 95%. ABPI therefore does not add much to clinical examination. Duplex improves the sensitivity but at some cost and inconvenience.

In a patient with some symptoms, a duplex to either rule out vascular disease or confirm vascular disease is justified, one of the challenges is to evaluate the importance of minor changes on a duplex in the face of other pathology. In an asymptomatic patient where clinical examination or ABPI is adequate, the cost of a duplex is probably not justified. Knowing that a patient has some peripheral vascular disease creates the opportunity to provide secondary prevention and will reduce long term mortality from cardiac and cerebro-vascular disease. Therefore asymptomatic patient in high risk age groups can be screening with clinical examination or ABPI. At this stage there is no evidence in favour of prophylactic intervention for vascular disease. In diabetics absent foot pulses or sensory changes are an indication that they my be at risk for diabetic foot infections.

### Aneurysm disease

Duplex ultrasound of the abdominal aorta is a highly sensitive and very cost effective test for AAA. Although there is no formal screening program in Australia it is reasonable to screen men at age 65. We can expect that a screening test will show an abnormal aorta in 6% of men. In women the incidence is much lower and therefore screening is not cost effective unless there is a maternal family history. Abdominal ultrasound is a common test and many patients will have had one.

Surveillance of AAA is also highly cost effective in those with an aorta greater than 3cm on the initial scan. In general surveillance intervals of less than 1 year provide no benefit over an annual scan, although once the AAA reaches 5.0cm it is reasonable to shorten the interval to six months. Patient should be referred at a size of 5cm or earlier if required. The threshold for surgery is 5.5cm and at this stage they are no longer allowed to drive.

Patients with an AAA have a 6% incidence of popliteal aneurysm and therefore all surveillance patients should have a popliteal artery scan at some point. Aneurysms where there are symptoms, loss of a distal pulse or that are >2cm should be referred for treatment.

### Carotid Disease

It is well known that patients with carotid bifurcation stenosis have a higher risk of stroke than those without. The strokes (and TIA or Amaurosis Fugax) are overwhelmingly caused by atheromatous embolization and therefore tend to be localised symptoms (weakness of arm or leg, slurred speech, mono-ocular visual loss) rather than global (dizziness, memory loss, syncope).

In the modern age surgery for asymptomatic disease is thought to confer so little benefit over conventional medical therapy (Statin and Aspirin) that very few surgeons will offer surgery to this group. Thus, screening is thought to have very little value. On the other hand patients with localising signs will benefit from carotid surgery and should be offered a prompt scan with referral for stenoses greater than 50%.

For this reason, surveillance of carotid stenosis is also increasingly thought to add very little benefit. It may be tricky to convince the patient of this, however.