



# CLINICAL UPDATE VASCULAR SURGERY

## AORTIC ANEURYSM AND DISSECTION

The most common life threatening aortic diseases are aneurysms and dissections. In New South Wales there are approximately 500 deaths and 2200 hospitalisations a year as a direct result of these.

The aorta becomes aneurysmal when its wall weakens and it dilates, however treatment is usually not considered until it shows signs of rapid expansion, pain or reaches a minimum threshold of around 5cm. Dissections on the other hand are caused by an intimal flap that results in blood flow within a dissection plane in the aortic media. They can result in pain, visceral malperfusion and even free rupture. Rupture of either results in a mortality in excess of 75%.

The typical aneurysm patient is a male over 50. Risk factors include smoking, hypertension and age. A first degree relative with AAA increases the risk of the disease 10 fold. I would recommend screening in anyone over 50 with a first degree relative affected, as well as males over 65 with risk factors. Ultrasound is a reliable and non-invasive screening investigation for abdominal disease and if positive, fine cut CT provides more detail for accurate measurement and decisions regarding suitability for treatment.

The field of endovascular treatment for these aortic diseases has progressed rapidly of recent times. Far beyond simple tube grafts we have evolved through modular graft systems to technologically advanced devices that have side branches for the viscera. New and alternative options include fenestrated graft systems where covered stents extend through holes in the fabric and into renal, mesenteric and celiac vessels. In this way treatment can be offered for extensive thoraco-abdominal aneurysms also.

Perioperative mortality is halved with an endovascular repair compared to open surgery. This safety has fuelled the endovascular revolution. The thoracic aorta has been the site of the most rapid advances in endo product development and technique. Far from the large scale mortality and dreaded spinal paraplegia associated with open surgery endo surgery has become the treatment of choice, minimising these during aortic repair. Newer techniques allow us to treat aortic disease as proximal as the ascending thoracic aorta without cardio-pulmonary bypass.

It is a truly exciting time in vascular surgery. Technological advancements in minimally invasive surgery allow us to treat almost all patients with aortic diseases. Aortic surgery is routinely performed through two incisions less than 1 cm and under local anaesthetic thus reducing the risk of treatment for even the sickest patient.

### Dr Ramon Varcoe

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Dr Varcoe is a surgeon with a passion for minimally invasive vascular procedures. In particular *thoracic aortic* aneurysms and dissections are his interest. He trained as an endovascular surgeon and completed a fellowship at St Marys and St Georges Hospitals in London and during that time visited leading centres all over Europe to hone the skills needed for treating these complex diseases.

He has appointments at Prince of Wales Public and Private Hospitals as well as the Eastern Heart Clinic.

He is a Senior Lecturer at the University of New South Wales, member of the International Society on Thrombosis and Haemostasis and widely published in several international journals of note.

#### ALL APPOINTMENTS

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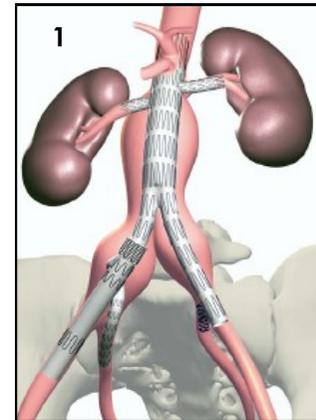
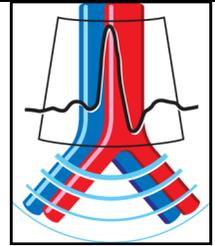


Fig 1. An endograft preserving flow to visceral and internal iliac branches

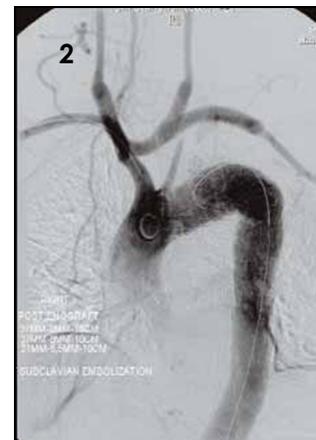


Fig 2. Hybrid surgery with carotid to carotid and subclavian bypass before endografting