Abdominal Aneurysm

By Dr Ismazizi Zaharudin

Dr Ismazizi Zaharudin explains the treatment option.

If you look at illustrations or diagrams of the heart or circulatory system, you would see a major blood vessel that extends from the top of the heart and curves downward. This is the aorta, the main blood vessel in the abdomen.

Leading down into the abdomen, it then divides into two, taking blood to the lower limbs.

As you can imagine, this is a crucial blood vessel and whenever any part of it becomes enlarged, we call in an aneurysm of the abdominal aorta. Such enlargements are at least twice the normal size of the aorta.

An abdominal aneurysm does not usually cause symptoms unless it becomes large enough to put pressure on nearby structures. If symptoms do occur, they are likely to be abdominal or back pains.

Upon diagnosis, an abdominal aneurysm must be carefully evaluated and monitored for indications of surgery. You do not want it to rupture, as a ruptured abdominal aneurysm is usually a fatal event.

Sudden, severe abdominal and/or back pain could precede rupture, and the patient may collapse. Clinically, a pulsating mass may be felt over the abdomen. The patient could also experience early satiety (feeling full very quickly when eating) due to the aneurysm compressing the stomach or early portion of the small bowel.

We do not want to discover an abdominal aneurysm only when it suddenly ruptures. Unfortunately, however, patients can unknowingly be walking around with such aneurysms, only presenting when they rupture.

Surgery for abdominal aneurysm has long been a conventional open repair procedure where a large abdominal incision is made, and the dilated part of the aorta is excised and replaced with a graft. It is a major operation that carries risks.

However, take heart as it is successful in most instances, and the aneurysm can be completely repaired. Long term prognosis is good, and the graft usually functions well for the rest of your life.

Today, we also have endovascular surgery for aorta repairs. This is a new surgical method that is less invasive than open surgery.

In endovascular surgery, we insert a long tube from both sides of the groin vessels (arteries) into the section of the aneurysm. This tube is then passed across the widened aneurysm and attached to the good aorta wall, using metal stents.

The primary concern about an abdominal aortic aneurysm is a rupture that leads to unexplained death. The other complication that can arise from an untreated abdominal aortic aneurysm is the sudden cessation of blood to both legs. The large aneurysm can also communicate (fistulate) into nearby structures such as the bowel or blood vessel (vena cava).

When this happens, the mortality rate can be between 32% to 70%. In the availability of vascular services, the patient can be transferred immediately to the operating theatre (OT), and the mortality rate can be reduced down to 15%. With its hybrid OT, IJN is well-equipped for such emergencies, and I have performed many of these myself as a vascular surgeon.

By Dr Shaiful Azmi

What Causes Abdominal Aneurysm and Can We Prevent It?

Senior Consultant Cardiologist Dr Shaiful Azmi Yahya talks about abdominal aneurysm and how we can prevent it.

An abdominal aortic aneurysm is an enlargement of the aortic segment caused by the weakening and/or stretching of the vessel wall. The aortic wall consists of three layers - adventitia, media and intima - that are made of protein structures. Once the structures are weakened, the layers become stretched and take the shape of a balloon (aneurysmal).

The commonest cause of an aortic aneurysm is degenerative ageing, which in itself is a reason why protein structures become weak. In general, this appears prevalent in those aged 60 and above. Atherosclerosis, smoking and hypertension accelerate this condition, hastening the aneurysmal dilatation.

Genetic factors are also involved, and it is not uncommon for patients to recall that their siblings had similar histories of aneurysms. Younger patients who have connective tissue diseases such as Marfan's Syndrome and Ehlers Darlos Syndrome may also present with aortic aneurysms.

An abdominal aortic aneurysm may be prevented by living a healthy lifestyle i.e., eating a healthy diet, exercising regularly, and identifying risk factors (if present) and controlling them. As smoking is a major risk factor, staying away from cigarettes is also a key preventative method. It would also be good to know your family history of illness.

An ultrasound screening for an aortic aneurysm at the age of 65 would be useful to identify any enlargement of the aortic vessel. Subsequent follow-ups and investigations may be necessary if abnormalities are discovered.