

## *Endoluminal Grafting for Abdominal Aortic Aneurysm*

### **PATIENT INFORMATION SHEET**

#### **What is an Abdominal Aortic Aneurysm?**

Aging and certain diseases can cause weakening of the aorta (the main artery from the heart to the lower body), which may become enlarged (a condition known as abdominal aortic aneurysm) and could burst. As the aneurysm gets larger it becomes more likely that it will burst. Bursting of an aneurysm usually results in death. It is generally recommended that aneurysms greater than 5cm be treated if the risk of rupture is greater than the risk of operating. There are two treatment options that may be available, depending on the patient's suitability: open surgical repair and endoluminal grafting.

#### **Open surgical repair**

Open surgical repair is a procedure that has been well tested over 40 years with excellent long-term results.

The conventional operation involves a large abdominal incision. The diseased part of the aorta is replaced by a synthetic fabric tube (called the prosthesis or graft). The graft prevents rupture by replacing the weakened, enlarged aorta.

Open surgical repair is a major operation requiring deep general anaesthesia with 1–2 days in intensive care and then 7-14 days in a general hospital ward. The operation carries the risk of serious complications, including an approximate 5% risk of death. The risk of complication is greater in patients with severe lung, heart or kidney disease.

#### **Endoluminal grafting**

Endoluminal grafting has only been in clinical use for less than 10 years. The endoluminal grafting procedure usually involves inserting the graft by way of a small thin plastic tube (catheter) through an incision in one of the groin arteries. The graft is guided into position using x-rays, then expanded and secured in place to restore a more normal blood flow through the aorta.

It is a less major procedure, but it does require the same period in the operating theatre as open surgical repair. It is usual to spend 4-7 days in a general hospital ward, with no time spent in intensive care. The overall risks of the procedure in suitable patients are different, and possibly less severe than those for open surgical repair, at least in the short term. Available evidence suggests that mortality rates associated with the endoluminal repair of small aneurysms at the time of the operation are similar to those of open repair. Similarly, complication rates for endoluminal repair are different but as frequent as those for conventional open repair. Complications associated with the endoluminal procedure include blockage of arteries or veins, internal blood leaks from the upper or lower join of the graft into the aneurysm, and even failure to insert the graft. If the graft cannot be placed, or if one of the major arteries is blocked, then open surgery may be required to correct these problems, frequently at the same operation.

While the endoluminal grafting procedure appears effective in the short term, it is a relatively new procedure and the long-term success of the grafts is uncertain and is the main concern for the method.