

The Minutes of the meeting of the Derby Medical Society

Held on 6th January 2015 in the Derby Medical School

Apologies: Mr Ian Scott

Welcome: Mr S Iftikhar, President

Minutes for the meeting 9th December 2014: Read by Mr S Milner, Junior Secretary, and approved.

GEM student prize 2014-15: Presented by Mr Iftikhar to Aileen Mohan, who attended the meeting.

Guest Lecture: Mr Waqar Yusuf, Consultant Vascular Surgeon, Sussex University Hospital, Brighton.
“Management of Aortic Aneurysms. Has much changed?”

Mr Yusuf gave an account of the history of aortic aneurysm treatment:

- 1951 – first recorded use of a human arterial allograft (Charles Dubost)
- 1951 – first use of insertion of endovascular wiring to promote thrombosis of the aneurysm
- 1957 – technique of repair of aortic aneurysm using a Dacron graft (Michael DeBakey and Denton Cooley)
- 1961 – inlay technique for graft insertion (Javid and Creech)
- 1960s / 70s – widespread availability of aneurysm repair in many hospitals
- 1980s – increasing awareness of outcomes, evidence and search for improvement
- 1985 – endovascular repair (EVAR) with an expanding stent (Voldos)
- 1991 – first published case series of EVAR (Parodi)
- 1992 – EVAR of thoracic aortic aneurysm (Dake)
- 1994 – EVAR of ruptured aortic aneurysm
- 1998 – EVAR using fenestrated grafts for supra renal aortic aneurysm

EVAR is not completely free of problems e.g. migration of graft, endo leakage (around the graft, inside the aneurysm sac), occlusion of aneurysm limbs, rupture. These can require re-intervention. Use of EVAR has followed a typical adoption curve for medical innovations.

Two randomised controlled trials have given information about patient selection for EVAR.

- EVAR 1 trial compared EVAR with open surgery in surgically fit patients. Mortality was 1.6% in the EVAR group and 6% in the open surgery group. However, re-intervention was required in 9% of EVAR patients and 1.7% of open surgery patients.
- EVAR 2 trial compared EVAR with medical treatment in patients not fit for open surgery. Mortality was 50% at 3 years in both groups because of comorbidities.

The incidence of ruptured aortic aneurysm is decreasing:

- Increasing use of CT as a diagnostic tool leads to more frequent incidental diagnosis of an aortic aneurysm
- National screening programme for aortic aneurysm since 2010. It is almost an ideal condition for a screening programme. Office of National Statistics data suggest that a single screening ultrasound scan for a 65 year old man will reduce the incidence of ruptured aortic aneurysm by 21.8% after 10 years.

Mortality from aneurysm treatment has improved over the last 10 years as a result of:

- Improved patient selection between open surgery and EVAR. EVAR has the most benefit in less fit patients
- UK national vascular registry, which publishes mortality rates by surgeon and unit, and is a powerful driver for change, e.g. establishment of separate vascular on-call rotas.

EVAR is still evolving as a technique. Newer developments include:

- Use of fenestrated grafts where the aneurysm includes the origins of important arteries, e.g. renal, mesenteric. Fenestrations can be added to a standard graft in theatre by the surgeon, but proprietary fenestrated grafts are increasingly available.
- Use of branched grafts that extend into the internal and external iliac arteries where these are aneurysmal
- Dealing with unusual anatomy, e.g. a pelvic kidney
- Endovascular re-intervention when problems occur after EVAR
- The use of staged EVAR to treat widespread aortic disease. This allows collateral circulation to establish, especially through lumbar arteries, reducing the risk of spinal cord ischaemia and paraplegia.

Mr Yusuf commented that EVAR is an expensive procedure, but that successful treatment leads to return to a normal life. He showed a short patient video. He concluded that although much has changed in aneurysm treatment, many basic principles have stayed the same for years.

Questions included:

- The source of endovascular grafts, which are manufactured in Australia
- The effect of increased healthcare regulation (eg NICE) on this type of innovation
- The natural history of aneurysm, and potential effect of drugs such as statins and aspirin
- How to improve stratification of surgical risk pre-operatively in the elective aneurysm patient
- Trauma as a risk factor for thoracic aortic aneurysm later in life

Vote of thanks: given by Mr Roddy Nash

Register: signed by 31 members, 1 trainee, 3 students and 4 guests

Next meeting: 20th January, 2015

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SY Iftikhar, President

Date: