EJVES Extra **1**, 000–000 (2001)
doi:10.1053/ejvx.2001.0058, available online at http://www.idealibrary.com on IDEAL®

CASE REPORT

An Unusual Thoracoabdominal Aortic Aneurysm

A. M. Shutt and G. E. Morris*

Department of Vascular Surgery, Southampton General Hospital, Southampton, UK

Key Words: Aneurysm aortic surgery; Aortic disease surgery; Aortography; Dilatation; Pathology; Ankylosing spondylitis; Complications; Case report.

Introduction

Aneurysms affecting the thoracic aorta more commonly occur in the elderly. We present the case of a thoracic aneurysm in a young man treated with a homograft repair.

Case Report

A 22-year-old man was admitted as an emergency with a 4 day history of right sided pleuritic chest pain, shortness of breath and a non-productive cough. Ten years earlier he was diagnosed with juvenile onset ankylosing spondylitis with predominant peripheral joint involvement. Two years later he was found to have inflammatory bowel disease and commenced on steroids. In an attempt to reduce his steroid intake he was commenced on azathioprine.

On examination, he was apyrexial, pulse 80/min, BP 110/70 mmHg. There was decreased air entry at his right base on chest examination, with bronchial breathing. A diagnosis of a pleural effusion was made. Investigations revealed a haemoglobin of 6 g/l, white count 11.7 × 109/l, MCV 62 fl. CRP 277.0 mg/l (Normal 0–6 mg/l). Arterial blood gases on air showed a pH 7.461, pO2 8.46—kPa, pCO2 4.23 kPa, HCO3- 21.3 mmol/l, BE 1.7. Chest radiograph confirmed an effusion. The effusion was drained, and the fluid cultured found to be sterile. CT scan confirmed the pleural effusion, collapse of the right lung, along with a smaller left-sided effusion. A 6-cm diameter saccular aneurysm of the descending thoracic aorta extending up a distance of 8 cm from the coeliac axis was found.

The aneurysm was repaired through a thoracoabdominal incision using a cryopreserved aortic homograft. Post operatively he returned to intensive care for 4 days, but made an otherwise uneventful recovery. Subsequent outpatient review found him to have recovered well. Follow-up MRI of the graft showed no untoward features.

Histology of the aortic wall was abnormal, with small numbers of residual elastic fibres, with much of the wall composed of fibrous tissue. Several foci of inflammatory cells which included lymphocytes, macrophages and giant cells consistent with an aortitis rather than a mycotic aneurysm were found. Tissue culture was sterile.

Discussion

No previous report of a type III thoracoabdominal aneurysm in association with juvenile ankylosing spondylitis repaired with a homograft has been reported, although the association of aortitis, ectasia and aneurysm formation with other autoimmune conditions have been made.[1]

Aortitis may be either infective or non-infective. The non infective causes may have predominant aortic involvement such as Takayasu's or chronic inflammatory changes of unknown cause associated with autoimmune type collagen vascular disease. These

* Correspondence to: Mr Gareth E. Morris, Department of Vascular Surgery, Southampton General Hospital, Tremona Road, Southampton SO16 6YD, UK.

1533–3167/00/000000+00 $35.00/0

may be difficult to distinguish from tuberculosis. Non-infective aortitis with incidental involvement of the aorta includes many of the autoimmune diseases, such as SLE, giant cell arteritis, rheumatoid arthritis, Sjögren's, Reiter's, ankylosing spondylitis, Cogan's and rarely Kawasaki's and Behet's syndrome.[2]

The association of aortitis with ankylosing spondylitis has been reported previously,[3] the commonest site involved being the aortic root.[4] The histological features described above are consistent with those previously reported.[5] It should be remembered that autoimmune disease may be associated with aneurysm formation.

References

1 Svensson LG, Crawford ES. Aortic dissection and aortic aneurysm surgery: clinical observations, experimental investigations, and statistical analyses. Part III. *Curr Probl Surg* 1993; **30**: 1–172.
2 Scully RE, Mark EJ, McNeely WF, Ebeling SH. Case records of the Massachusetts General Hospital. *NEJM* 1999; **340**: 635–641.
3 Baron JH. Aortitis and ankylosing spondylitis. *Lancet* 1969; **i**: 106.
4 Tucker CR, Fowles RE, Calin A, Popp RL. Aortitis in ankylosing spondylitis: early detection of aortic root abnormalities with two dimensional echocardiography. *Am J Cardiol* 1982; **49**: 680–686.
5 Marquis Y, Richardson J, Ritchie AC, Wigle ED. Idiopathic medial aortopathy and arteriopathy. *Am J Med* 1968; **44**: 939–954.