

## SHORT REPORT

# Mycotic Supra-Cœliac Aortic Aneurysm due to Anaerobic Infection

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### Introduction

Infected aneurysms are uncommon and only account for a minority (less than 4%) of all aneurysms.<sup>1</sup> We report the unusual case of a patient with a vesico-vaginal fistula as a complication of endometrial carcinoma, who was found to have a mycotic aneurysm as a reason for her severe back pain. Culture of the aortic wall grew anaerobic Gram negative bacilli.

### Case History

A 72-year-old lady was admitted to hospital with a history of severe back pain. It had developed after the patient underwent a radical hysterectomy for grade III endometrial adenocarcinoma, 3 months earlier. This had been complicated by a vesico-vaginal fistula.

On admission, the patient appeared flushed and in pain, the abdomen was tender with no signs of peritonism. She was tachycardic and afebrile. Laboratory investigations revealed a haemoglobin of 8.5 g/dl, a white cell count of  $21.3 \times 10^9 l^{-1}$  with a neutrophilia and a C-reactive protein level of 217 mg/l.

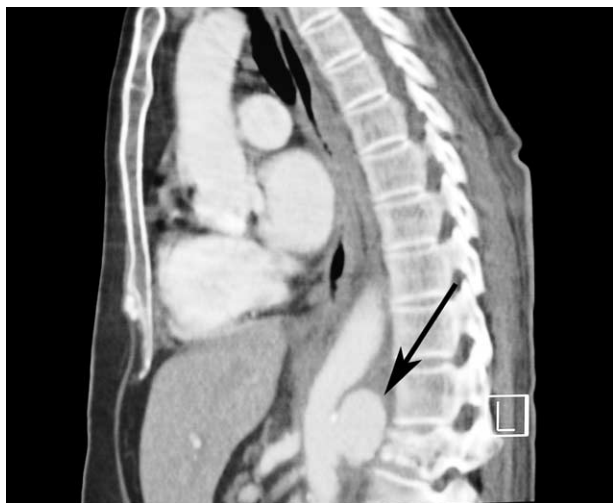
A plain lumbar radiograph the month before the patient's admission was normal. She then had an intravenous contrast enhanced CT scan, which demon-

strated the presence of a large false aneurysm of the supra-cœliac aorta surrounded by haematoma (Fig. 1). The patient underwent urgent repair via a thoraco-abdominal approach. A false aneurysm was found above the cœliac axis. Aortic clamps were applied above the diaphragm and below the renal arteries. The warm ischaemia time was 42 min and the aorta was trimmed back to healthy borders at the level of diaphragm above, and just above the cœliac origin below. In situ arterial reconstruction was then achieved using a gelatin coated knitted Dacron graft, wrapped in a gentamicin-impregnated fleece.

Postoperatively, the patient was commenced on intravenous antibiotics. Cultures of the aneurysmal wall and surrounding haematoma grew anaerobic Gram negative bacilli, identical to that obtained following culture of the vaginal discharge which had led to the diagnosis of the vesicovaginal fistula 2 months earlier. Histological examination demonstrated the same organism in the aortic wall with no evidence of malignant infiltration. The patient was initially commenced on intravenous vancomycin and tazocin with an intraoperative dose of gentamicin. On postoperative day 6 the antibiotics were changed to intravenous ciprofloxacin and metronidazole according to organism sensitivity and we continued those for a total period of 6 weeks. Inflammatory markers returned to normal after antibiotic therapy.

Six months after surgery, she is asymptomatic with normal inflammatory markers. Urologists are planning a repair of the vesico-vaginal fistula.

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**Fig. 1.** CT-scan, saggital view of a saccular aneurysm and surrounding haematoma.

### Discussion

Many different organisms have been reported in the literature as causes of aortic mycotic aneurysms, but the vast majority of these are aerobic bacteria. Indeed, the most frequently occurring pathogen identified from cultures of intraoperative specimens are *Salmonella* species (Gram negative aerobes) followed by *Staphylococcus aureus* (Gram positive aerobe).<sup>2</sup> The recovery of anaerobic bacteria on the other hand is rarely reported and this may be due in part to the fastidious growth requirements of anaerobes.

Surgical intervention involves ligation and excision of the aneurysm, adequate debridement of associated infected tissue and revascularisation by either extra-anatomic or in situ bypass grafting. The latter is

commonly achieved using a prosthetic Dacron or PTFE graft, but there are recent reports of the use of cryopreserved homograft or autogenous femoral vein.<sup>3</sup>

In situ bypass grafting is associated with better long-term patency rates than extra-anatomic reconstruction but involves placing a graft within an infected field with the potential risk of subsequent graft infection.<sup>4</sup> Some studies have shown a survival advantage associated with in situ revascularisation<sup>5</sup> and the favourable outcome which can be achieved is illustrated by the case reported here.

The onset of severe back pain in a patient with an on-going septic source should raise the diagnostic possibility of a mycotic aortic aneurysm.

### References

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