A rare case of clostridium septicum mycotic aortic arch aneurysm following open right hemicolectomy for colorectal cancer

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DESCRIPTION

A previously fit and well 63-year-old man, developed fever (38°C) on third postoperative day following an uncomplicated (no haemorrhage or faecal spillage) elective, open right hemicolectomy for a Dukes B pT3N0M0 tumour. Physical examination revealed bilateral lung crepitations and a non-tender abdomen. Routine bloods and a blood culture were sent. A chest radiograph was performed which revealed a widened mediastinum (figure 1). Owing to this finding an urgent CT angiogram was performed which revealed a 7.2 cm aneurysmal dilation of the aortic arch, extending to the mid-thoracic aorta, with gas seen within the wall of the aorta (figures 2 and 3). Comparison with the patient's preoperative staging CT 6 weeks

ago revealed none of these changes (figure 4). The case was discussed with the regional cardiothoracic unit and immediate transfer was arranged. Unfortunately the patient died soon after arrival following a decision that surgical repair was not feasible given the extent of disease and the patients deteriorating condition. Blood cultures taken would later grow *Clostridium septicum*.

C. septicum is a Gram positive, spore-forming bacterium. It remains a rare cause of perioperative sepsis in patients with colorectal malignancy. There are some reports recently of *C. septicum* infection causing mycotic aneurysms resulting in high mortality.^{1 2} A number of case series has suggested a link between *C. septicum* infection and malignancy.³ This is the first report to our knowledge of

Figure 1 Chest radiograph revealed a widened mediastinum.

Figure 3 CT angiogram showing aneurysm of aortic arch and descending thoracic aorta, with gas seen within the wall of the aorta.

Figure 2 CT angiogram showing aneurysm of aortic arch and descending thoracic aorta, with gas seen within the wall of the aorta.

Figure 4 Preoperative staging CT showing normal aortic arch.

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a mycotic aneurysm following *C. septicum* infection complicating the postoperative course of a right hemicolectomy. Early suspicion, diagnosis and prompt treatment are key to improve outcome, although mortality remains high.

Learning points

- ▶ *Clostridium septicum* is present in the normal human intestinal flora.
- ▶ *C. septicum* infections are associated with colonic or haematological malignancy.
- ▶ Although mycotic aneurysm following *C. septicum* infection is rare a high index of suspicion is needed for the diagnosis.
- ▶ Antibiotics and surgical treatment remains the mainstay of treatment.

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