A thrilling mass

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Clinical

An 88-year-old woman with longstanding dementia was referred to the Emergency Department with a 1-day history of dizziness, increasing confusion and unexplained hypotension.

On examination, she appeared pale and confused. Her heart rate was 85/min, blood pressure 84/57 mmHg and oxygen saturation was 98% on room air. There was a mildly tender, pulsatile mass in the central abdomen associated with an abdominal bruit on auscultation.

An urgent CT angiogram of the abdominal aorta was performed demonstrating the findings shown in Figures 1 and 2.

Figure 1. A transverse section of CT angiogram of the aorta showing a communication between the abdominal aortic aneurysm and the inferior vena cava
What is the diagnosis and what are the management options?
Answer and discussion

The CT angiogram shows the inferior vena cava filling with contrast early in the arterial phase, a finding consistent with an aortocaval fistula. There is no evidence of intra- or extra-peritoneal rupture.

Aortocaval fistula was first described by Syme⁴ and is a rare but life-threatening complication of abdominal aortic aneurysm. It is found in less than 1% of all abdominal aortic aneurysms and occurs in 3–4% of ruptured aneurysms.¹,²

The clinical presentation is variable and largely depends on the size and the location of the fistula.¹ The triad of low back pain, palpable abdominal aortic aneurysm and a machinery abdominal murmur is diagnostic, and may be associated with high-output cardiac failure and regional venous hypertension.

Aneurysmorrhaphy in aortocaval fistula carries an operative mortality of approximately 30%, no greater than mortality associated with other ruptured abdominal aortic aneurysms.² Endovascular repair has been reported.³

Given the patient’s age, comorbidities and pre-morbid status, the decision was made to proceed with non-operative management and palliation. She steadily deteriorated over the next few days and passed away on day 5 post-presentation from cardiac failure.

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