

When Renal Colic Isn't Renal Colic: Ruptured Abdominal Aortic Aneurysm Masquerading as Flank Pain

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Abdominal pain remains one of the most diagnostically challenging presentations in emergency medicine. Although flank pain with dysuria and vomiting commonly suggests renal colic or pyelonephritis, clinicians must remain vigilant for time-critical vascular emergencies that mimic these conditions.

An independent woman in her seventies with a background of hypertension presented to the emergency department with sudden left flank pain, vomiting, and dysuria. The pain had initially resolved with paracetamol before recurring several hours later. She denied fever, haematuria, or bowel symptoms. As her observations were initially reassuring and she was pain-free at triage, she was reviewed on a semi urgent basis.

Approximately 45 minutes later, patient became hypotensive with a systolic blood pressure of 82 mmHg, prompting immediate transfer to the resuscitation area. Aggressive intravenous fluid resuscitation was commenced, and initial venous blood gas analysis demonstrated acute kidney injury, with an estimated creatinine level of 126 $\mu\text{mol/L}$ (Normal: 45-90), and hyperlactataemia of 3.9 mmol/L (Normal: ≤ 2.0). Emergency department examination revealed marked tenderness and rigidity to the left of the umbilicus, while renal angle tenderness was absent. The surgical team was consulted, and they thought there was nothing to suggest an abdominal surgical emergency. Despite initial resuscitation, repeat venous blood gas analysis demonstrated a rising lactate of 4.6 mmol/L, indicating worsening tissue hypoperfusion.

The differential diagnosis shifted dramatically from renal colic to catastrophic intra-abdominal pathology, including mesenteric ischaemia, ruptured abdominal aortic aneurysm (AAA), leaking AAA, bowel perforation, and obstructive uropathy complicated by sepsis. Despite concerns regarding iodinated contrast in the setting of impaired renal function, the immediate threat to life outweighed the risk of contrast-associated kidney injury. Following discussion with radiology, urgent contrast-enhanced CT abdomen and pelvis with CT mesenteric angiography was performed.

Imaging confirmed the diagnosis: **ruptured abdominal aortic aneurism.**

This case highlights the enduring importance of repeated bedside assessment and clinical judgement. Hypotension, rising lactate, and evolving abdominal findings should never be dismissed, even when the initial presentation appears consistent with a common diagnosis. A normal or reassuring examination by another clinician should not override persistent concern when objective markers indicate deterioration.

In elderly patients presenting with flank or abdominal pain, particularly those with vascular risk factors such as hypertension—ruptured AAA must always remain a critical differential diagnosis, as early recognition and expedited imaging are pivotal to improving survival.



Figure 1. CT Abdomen and Pelvis (coronal view)
Showing a large AAA with a brightly enhancing lumen, with an active leak & with an extensive left-sided hematoma.

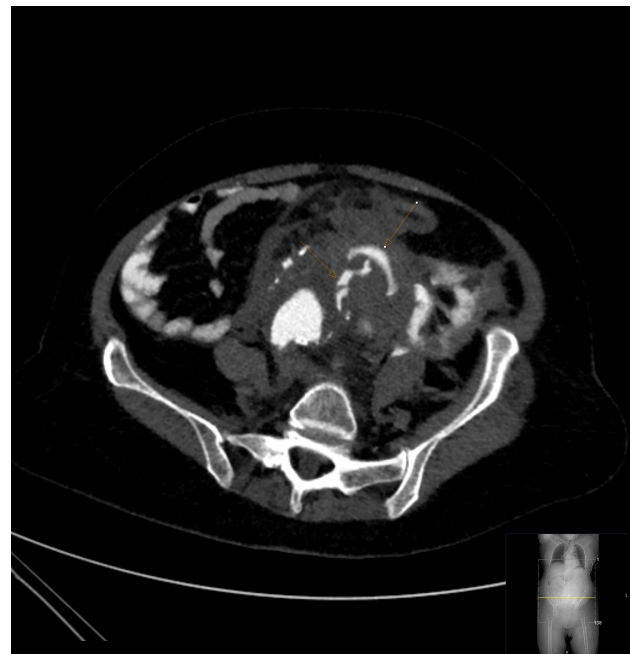


Figure 2. CT Abdomen and Pelvis (axial view)
Showing an active leak from a ruptured AAA