A 52-year-old man with a history of hypertension presented with a sudden onset of swelling in the left thigh and dyspnoea on exertion. His hypertension was well controlled with amlodipine, and he had no other clinically relevant medical history. On examination, the blood pressure was 108/66 mmHg, the pulse 100 bpm, the respiratory rate 16 breaths per minute, and the oxygen saturation 97% (ambient air). A pulsatile mass with a continuous murmur was palpable in his left lower abdominal quadrant. Chest X-ray showed mild pulmonary congestion without cardiomegaly. BNP was 520 pg/mL. Contrast-enhanced abdominal computed tomography revealed an isolated left internal iliac artery aneurysm with massive thrombus and the presence of a fistulous communication between the aneurysm and the left common iliac vein (Panels A and B).

We also used ultrasonography to observe shunt blood flow from the left internal iliac aneurysm to the left iliac vein. An urgent operation was performed for the resection of the aneurysm, and the patient recovered without any complications.

Arteriovenous fistula resulting from the perforation of an intra-abdominal aneurysm to a vein is rare. Its frequency has been reported to be 3–4% for ruptured aneurysms and 1% for non-ruptured aneurysm. The patient had a triad of symptoms associated with an iliac arteriovenous fistula, which included high-output cardiac failure of precipitous onset, a pulsatile abdominal mass accompanied by a thrill and bruit, and unilateral lower extremity ischaemia or venous engorgement. Therefore, he was immediately diagnosed and received appropriate treatment. If a patient presents with abrupt dyspnoea, an abdominal examination should be performed considering the possibility of the presence of an iliac arteriovenous fistula.

Conflict of interest: None of the authors have any financial interests to disclose, nor do they have any conflict of interests to declare.

Panel A. An abdominal computed tomography (CT) with contrast media (axial view). Isolated left internal iliac artery aneurysm (white arrow) with massive thrombus (black arrow) was revealed.

Panel B. An abdominal computed tomography (CT) with contrast media (coronal view). A fistulous communication was found between the artery aneurysm and the left common iliac vein (black arrowhead).

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