



Large Pelvic Arteriovenous Malformation – A Bloody Near Miss

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Our patient, a healthy 32-year-old man, was referred for non-specific left flank pain with no associated symptoms. Physical examination findings were unremarkable. Computed tomography (CT) urography revealed a circumscribed enhancing mass in the left hemipelvis initially thought to be obturator lymphadenopathy from possible lymphoma (Fig. 1). A CT-guided biopsy yielded pulsatile blood. CT angiography fortunately did not demonstrate any extravasation, but it did reveal an arteriovenous malformation (AVM) with a large venous aneurysm mimicking a pelvic mass. This was further characterized on catheter angiography, which demonstrated multiple feeding vessels from the inferior mesenteric artery (IMA) and left internal iliac artery (IIA) with involvement of the rectal wall (Fig. 2). Our patient underwent staged angioembolizations over two sittings, beginning with 2.65 mL of Onyx18 (Medtronic, Dublin, Ireland) delivered to four IIA branches using a right common

femoral artery (CFA) crossover approach and subsequently to IMA branches using a left retrograde CFA approach (Fig. 3). He achieved symptom resolution with a small residual AVM component on magnetic resonance angiography (Fig. 4).

Our patient's AVM was unique in that it received a blood supply from multiple vessels from the left IIA and IMA. Moreover, it contributed to the rectum's vascular supply, complicating treatment due to the potential for rectal ischemia. Management options include surveillance with serial imaging, endovascular techniques such as coiling or glue embolization to treat the nidus, or open surgical resection [1,2]. Given the unique profile of our patient's AVM, staged embolization of the feeding vessels to achieve symptom relief was preferred starting with the left IIA branches and progressing to the IMA branches if symptoms persist. This case highlights that AVMs can be difficult to diagnose on

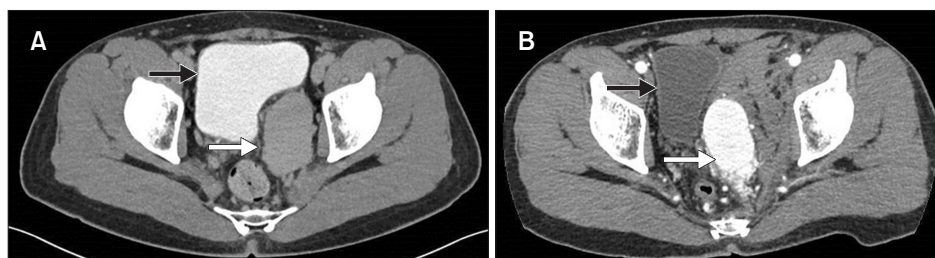


Fig. 1. (A) Circumscribed left hemipelvis-enhancing mass was detected on the venous phase of computed tomography (CT) urography. (B) Corresponding image on CT angiography indicated that the left hemipelvic mass was actually a venous aneurysm of a pelvic arteriovenous malformation (AVM). A hematoma resulted from the biopsy, but no active contrast extravasation was seen. The black arrow indicates the bladder, while the white arrow indicates the AVM.

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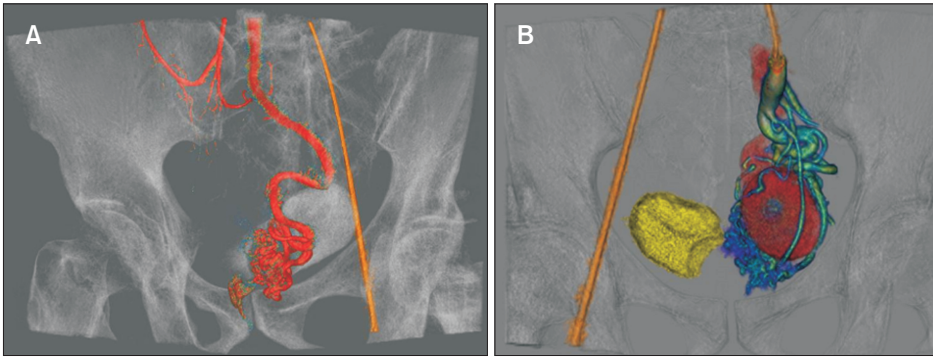


Fig. 2. Catheter angiography images demonstrated the feeding vessels from branches of the inferior mesenteric artery (A) and internal iliac artery (B).



Fig. 3. Completion angiography after embolization of the feeding vessels.

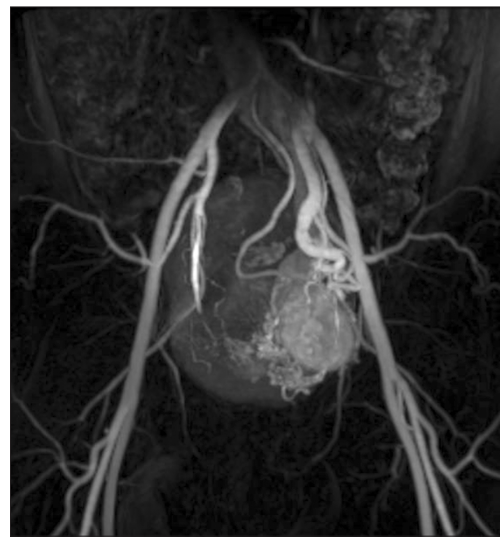


Fig. 4. Magnetic resonance angiography showed a small residual arteriovenous malformation component and symptom resolution.

CT urography, in which images are acquired in the non-contrasted and venous phases only and that contrast-enhanced CT should be performed prior to biopsy to avoid

catastrophic bleeding. Thankfully, our patient's bleeding was self-limiting and he did not require transfusion.

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