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Images in Clinical Medicine

May–Thurner syndrome caused by a huge uterine myoma

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A 45-year-old woman presented to our emergency department with a chief complaint of swelling and pain in her left calf and thigh for 2 days. She had a huge uterine myoma with hypermenorrhea for a couple of years and had been taking an oral contraceptive consisting of cyproterone and ethinyl estradiol (Diane-35) prescribed by a gynecologist for the past 16 days. She denied previous medical disease, recent trauma, recent abdominal surgery, and long-term immobilization. A physical examination revealed a swollen, painful left lower limb. Blood tests revealed normal cell counts and coagulation profiles, but she had a significantly elevated D-dimer level (>10,000 μg/L). Ultrasonography of the lower limbs revealed non-compressible left femoral and popliteal veins. Subsequent contrast-enhanced computed tomography venography showed left femoral deep vein thrombosis (DVT) [Figure 1, arrows]. Compression of the left common iliac vein [Figure 2, white arrows] by the overlying huge uterine myoma (asterisk) and right common iliac artery (black arrows) was also found [Figure 2]. A variant of May–Thurner syndrome was suspected. After admission, thrombolytic therapy with urokinase and enoxaparin were initiated. Her condition improved rapidly, and she was discharged uneventfully 3 days later. She was referred to a gynecologist for surgical evaluation of the huge uterine myoma because the DVT could recur if the anatomical lesion was not removed.

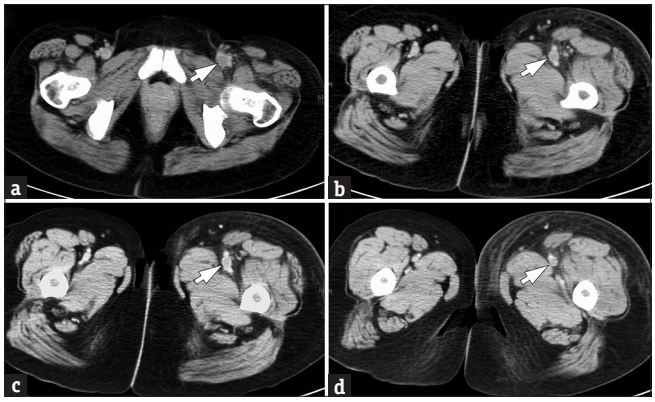

Figure 1: Enhanced computed tomography venography of the lower limbs shows a swollen left thigh and a filling defect in the left femoral vein (arrows)

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May–Thurner syndrome (or iliocaval compression syndrome) is defined as a compression of the iliac vein that results in decreased flow in the vein and the left lower extremity due to a vascular malformation. It may result in left leg edema, pain, iliofemoral DVT, and postthrombotic syndrome. Compression of the left common iliac vein by the right common iliac artery against the underlying fifth lumbar vertebra is the typical underlying malformation [1,2]. It is rarely diagnosed but is prevalent in postmortem examinations. Hence, it is thought to be underestimated. Various conditions resulting in compression of the left common iliac vein by the right common iliac artery and underlying spine which lead to the development of left femoral DVT have been reported, including prolonged immobilization, dehydration, contractive therapy, surgical procedures for abdominal, gynecological, or spinal pathology, multiple pregnancies, and postpartum conditions [2-6]. However, May–Thurner syndrome secondary to a huge uterine myoma has not been reported previously.

Pharmacological treatment, endovascular intervention, and surgical management have all been proposed

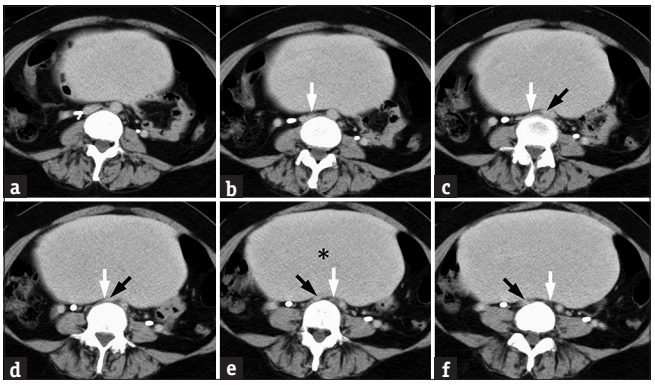

Figure 2: Serial enhanced computed tomography venography in sequence from (a-f) shows the left common iliac vein (white arrows), which is compressed by the overlying right common iliac artery (black arrows), the uterine myoma (asterisk) and the underlying vertebral body

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as treatments [1], but there is currently no consensus. Furthermore, definitive treatment should be tailored to each patient as the condition varies. Familiarity with May–Thurner syndrome as an etiology of unilateral DVT is important, because of possible recurrence of thrombosis, pulmonary embolism, and postthrombotic syndrome, which could lead to significant morbidity and mortality. The key to successful treatment in May–Thurner syndrome-related DVT is to correct the anatomical lesion along with the removal of the clot and use of anticoagulation.

Declaration of patient consent

The authors certify that the patient has obtained an appropriate patient consent form. In the form, the patient has given her consent for her images and clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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