

Misdiagnosis of a Large Uterine Vein Thrombosis as a Uterine Myoma Prior to Hysterectomy: A Case Report

Dear Editor,

Intravascular thrombosis is a serious problem that sometimes causes death due to acute pulmonary thromboembolism (PTE). There are a few reports on the association between uterine myomas and venous thromboembolic diseases^{1,2} and ovarian vein thrombosis after cesarean delivery,³ but reports of uterine vein thrombosis without complications are rare.^{4,5} We describe an uncommon case of uterine vein thrombosis without any risk factors or complications.

Case Report

A 48-year-old non-smoking woman (gravida 4, para 2, aborta 2) was admitted to our hospital with aggravation of her chronic lower abdominal pain. Her chronic pelvic pain and discomfort had begun one year prior. She had experienced aggravating acute pelvic pain several times within a year while she was going about her usual daily activities. She had been diagnosed with a uterine myoma 6

years previously, but she had declined treatment for this. On admission, she had no fever or edema in either of her lower extremities. Her body mass index (BMI) was 23.4 kg/m² (160 cm, 60 kg). The haemogram, ionogram, coagulation work-up, and urinalysis results were normal. There was no relevant family history of disease. Past medical history included no use of oral contraceptives and no history of deep vein thrombosis (DVT) or hypertension. The patient also had no prior surgical history.

Transvaginal sonography revealed a 4.5-cm mixed echogenic mass at the right side of the lower uterine segment. An increased peripheral vascularity near the mass was observed, but no venous flow was observed just near and within the mass. We considered the mass to be a cystic degeneration of myoma uteri (Fig. 1).

A routine preoperative abdominal computed tomography (CT) revealed the uterus with a 4.5-cm intramural myoma with cystic degeneration at the right side of the lower uterine segment and a benign-looking cystic lesion in the right ovary (Fig. 2).

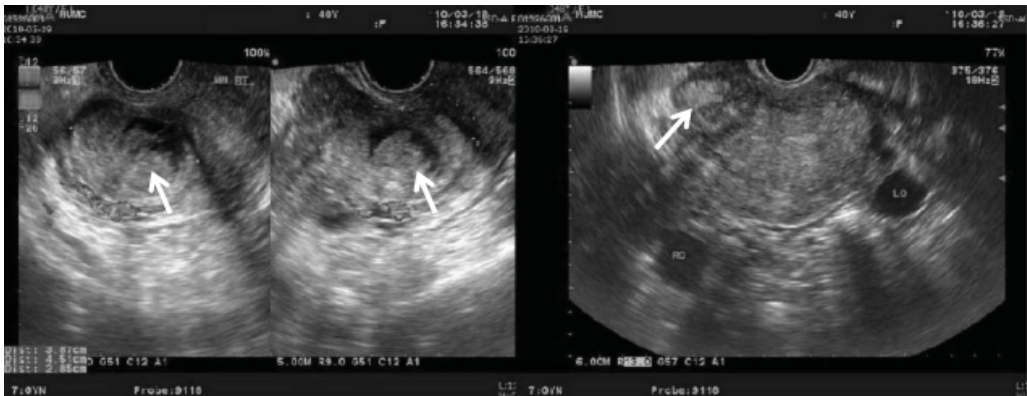


Fig. 1. Transvaginal ultrasonogram shows a 4.5-cm mixed echogenic mass with some hypoechoic round area at the right lateral wall of the uterus (arrows).

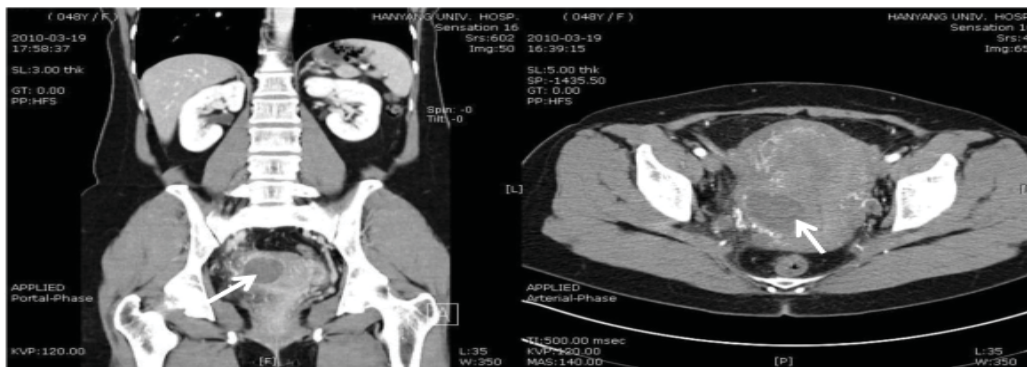


Fig. 2. The computed tomography shows a round mass lesion around the right lower side of the uterus (arrows).

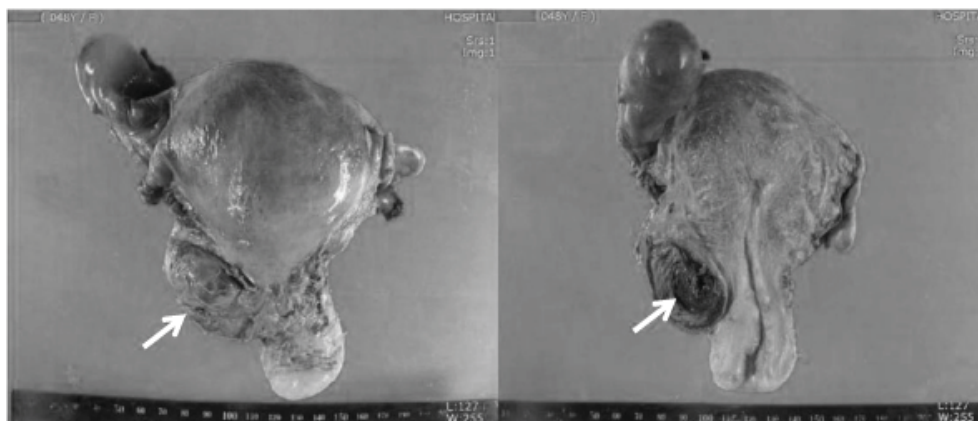


Fig. 3. Gross appearance of the removed uterus and cross section. The myometrium of the right lower uterine segment shows a relatively well demarcated haemorrhagic mass, measuring 4 cm x 2.7 cm in cross diameter. The mass shows a whirling appearance and haemorrhage. Note the thrombi mass (arrows).

We recommended conservative management, but she opted for total hysterectomy instead. This was performed without complications. During surgery, the 4-cm bulging mass at the right lower uterine segment (Fig. 3) and a large right side varicose uterine plexus were observed. These vessels were tortuous and thick, but they were not seen as a pathologic finding to speculate the uterine venous thrombosis. The patient's postoperative course was unremarkable. However, the pathologic finding, determined on the 4th postoperative day, was a venous thrombosis without any evidence of leiomyoma. We immediately requested postoperative enhanced CT angiography. Fortunately, the scan showed normal vessels with no thrombus and adequate venous blood flow. The plasma levels of protein C, protein S, antithrombin III, anticardiolipin antibody, and lupus anticoagulant measured on the 4th postoperative day were normal. We therefore decided not to initiate anticoagulant therapy, and the patient was discharged on the 6th postoperative day and has not experienced any complications to date.

Discussion

Pelvic vein thrombosis is an uncommon but potentially fatal complication of gynaecologic surgery, caesarean section, or vaginal delivery that can lead to death. Stasis of blood flow, injury to the venous wall, and the hypercoagulability of blood are potential causes of venous thrombosis, risk factors of which include obesity, heart failure, malignant disease, and oral contraceptive use. Inherited clinical risk factors that predispose one to the development of venous thrombosis have been reported in patients with deficiencies in antithrombin III, protein C, or protein S.¹ Because the clinical features of pelvic vein thrombosis, such as lower abdominal pain are non-specific, it should be distinguished from pelvic abscesses, uterine tube torsion, pedunculated uterine fibroids, haematomas, or phlegmons of the broad ligament.⁵ In our patient, however,

none of the classic features such as fever, warmth or swelling, and no abnormal clotting factors were observed.

Venous thrombosis can be diagnosed using ultrasonography, magnetic resonance imaging (MRI) or CT. Ultrasound has previously been widely used to evaluate venous thrombosis, and Doppler ultrasound can also be used for diagnosis and later follow-up of flow restoration.³ Leibovitz et al⁴ reported that the thrombi within dilated veins appeared as elongated echogenic structures along the round lumen on transvaginal sonographic transverse views of the affected veins. They showed swinging movements provoked by gentle transducer pressure. Power and Color Doppler sonographies can enhance the diagnosis of uterine venous plexus thrombosis by showing blood flow around the thrombi. In our case, the sonographic findings were very similar to the descriptions provided by Leibovitz et al.⁴ The mass contained a mixed echoic portion and a fluid echo, which we interpreted as blood flow around the mass. However, we did not diagnose the lesion as a thrombus of a dilated uterine vein but rather as a myoma with secondary cystic degeneration because the mass was large and located deep in the right side of the uterus. There is no reasonable or specific diagnostic tool for detecting chronic uterine vein thrombosis. Therefore, it may be helpful to be reviewed by a diagnostic imaging expert if in doubt of a benign mass.

Therapeutic treatment of uterine venous plexus thrombosis is controversial and still empirical.⁴ Most studies suggest the use of low molecular weight heparin (LMWH) and broad-spectrum antibiotics. Our patient fortunately had a complication-free postoperative course without any evidence of a pulmonary or other embolism. However, when a patient is thought to be at high risk for a pulmonary embolism or when one is present, medical treatment or endovascular or surgical procedures such as thrombectomy, cava filters or cava vein ligation may be indicated.

Conclusion

In conclusion, a large uterine vein thrombosis can be misdiagnosed as a uterine myoma in view of the difficulty of the diagnosis from both the clinical and imaging perspectives. Careful detection of the preoperatively formed mass and strict perioperative management are needed and may positively affect the patient prognosis.

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