

Leiomyoma with transcervical prolapse

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Section: Genital (female) imaging

Area of Interest: Genital / Reproductive system female

Procedure: Diagnostic procedure

Imaging Technique: Ultrasound

Imaging Technique: Ultrasound-Power Doppler

Special Focus: Haemorrhage Case Type: Clinical Cases

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Patient: 41 years, female

Clinical History:

A 41-year-old woman arrives at emergency room with pelvic pain associated with vaginal bleeding. She refers regular menstrual cycles with dysmenorrheal and intensive menorrhagia.

On observation, we visualized a mass that externalised the cervix. Bimanual palpation reveals a mass with no certain origin.

Imaging Findings:

This mass appear as concentric, solid and hypoechoic, that absorb sound waves and therefore cause a variable amount of acoustic shadowing. Doppler showed the origin on posterior wall of uterus.

Fig 1- Normal sized uterus

Fig 2 - Fibroid occupying cervical canal

Fig 3 - Vascular pedicle originates from posterior uterine wall

Figs 4/5 -Normal ovaries

With those findings our diagnosis was uterine prolapsed fibroid. It was performed a vaginal myomectomy with hysteroscopy. It was found a mass fixed by a pedicle to the posterior wall of uterus. The pedicle was ligated using bipolar coagulation, and removed the mass. The rest of uterine cavity was visualized and was normal.

The pathological findings showed a benign smooth muscle tumor with spindle-shaped cells that are uniform in size and shape without intravascular component, without atypia or cell necrosis. Those findings are compatible with uterine fibroid.

Discussion:

Background

Uterine leiomyomas (fibroids or myomas) are the most common pelvic tumour in women. Although most uterus leiomyomas are asymptomatic, patients may present with symptoms of abnormal uterine bleeding or pelvic pain/pressure. They may have reproductive effects (eg, infertility, adverse pregnancy outcomes). [1, 2, 3]

Fibroids are often described according to their location in the uterus (submucosal, intramural or subserosal)[2]

Infrequently, a submucosal leiomyoma may present with transcervical or transvaginal prolapse, resulting in ulceration or infection. The prevalence of such submucosal leiomyomas is estimated to be 2.5%[3]

Clinical perspective: Symptoms are related to the number, size, and location of the fibroids. Infrequently, fibroids can

cause acute pain as a result of degeneration or torsion of a pedunculated tumour. [2] Pain may be associated with a low grade fever, uterine pain on palpation, elevated white blood cell count, or peritoneal signs. Those changes can be self-limited, from days to a few weeks, and usually responds to anti-inflammatory drugs. A leiomyoma with transcervical prolapse, can result in ulceration or infection [1, 3]

Imaging perspective:

Transvaginal ultrasound has high sensitivity (95 to 100 percent) for detecting prolapsed myomas.[1] Computed tomography has little clinical utility in delineating the position of fibroids relative to the endometrium or myometrium but multidetector CT (thin slices, multiplanar and 3D reformations) has improved the diagnostic performance of the technique in determining the location of leiomyomas relative to endometrium or myometrium.

Infusion sonography (sonohysterography) improves characterisation of the extent of protrusion into the endometrial cavity. Magnetic resonance imaging is the best modality for visualising the size and location of all uterine myomas and can distinguish among leiomyomas, adenomyosis, and adenomyomas. Due to the expense of this modality, its use is best reserved for surgical planning for complicated procedures. [2, 3, 6]

Imaging findings:

Ultrasound is the study of choice. Conventional radiography shows enlargement of the uterus as a nonspecific soft-tissue mass of the pelvis that possibly displaces loops of bowel with amorphous calcifications. [5]

Ultrasound-Fibroids appear as concentric, solid, hypoechoic masses. These solid masses absorb sound waves and therefore cause a variable amount of acoustic shadowing.[5]

MRI: Fibroids appear as sharply margined areas of low to intermediate signal intensity on T1- and T2-weighted MRI scans. One third of fibroids have a hyperintense rim on T2-weighted images as a result of dilated veins, lymphatics, or edema.[5]

CT shows mass containing mixed densities, low attenuation if necrotic and higher attenuation if calcified or hemorrhagic.[5]

Outcome- Relief of symptoms related to fibroids usually occurs at the time of menopause, when menstrual cyclicity stops and steroid hormone levels wane. Most, but not all, women have shrinkage of leiomyomas at menopause. Use of postmenopausal hormone therapy may cause some women with leiomyomas to continue to have symptoms after menopause and may be associated with an increase in size of existing myomas, but not with the development of new myomas.[2]

Differential Diagnosis List: Leiomyoma with transcervical prolapse, Uterine carcinosarcoma, Endometrial carcinoma, Uterine adenomyosis or adenomyoma, Focal myometrial contraction, Uterine leiomyosarcoma

Final Diagnosis: Leiomyoma with transcervical prolapse

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Figure 1

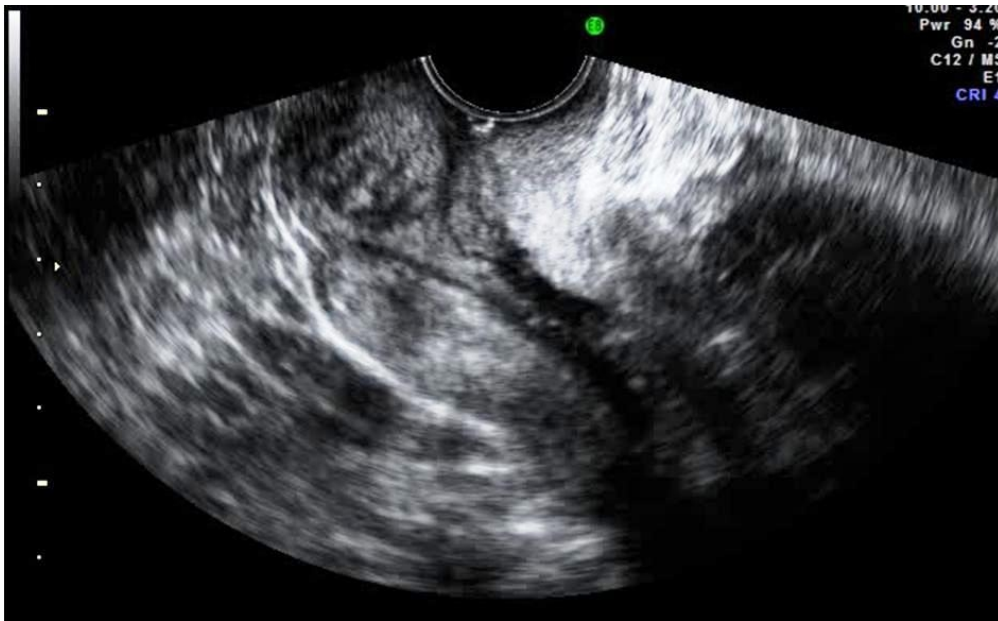
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Description: Uterus with normal size **Origin:**

Figure 2

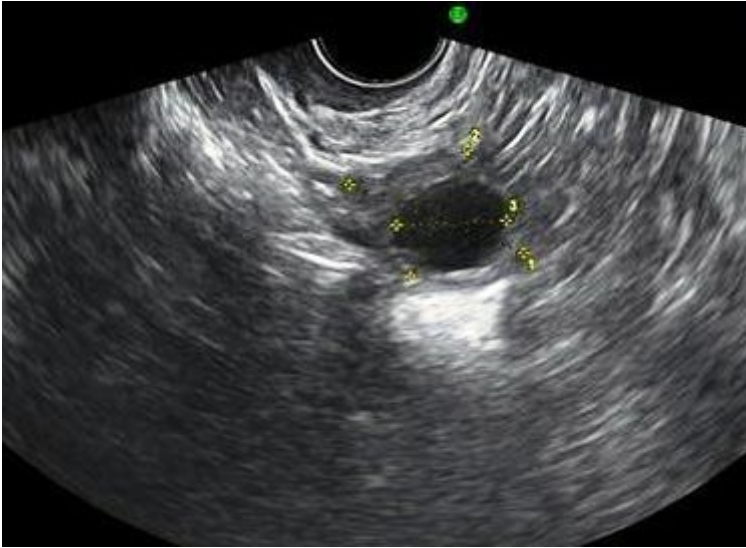
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Description: Prolapsed fibroid, exceeding cervix **Origin:**

Figure 3

a



Description: Normal Adnexa **Origin:**

Figure 4

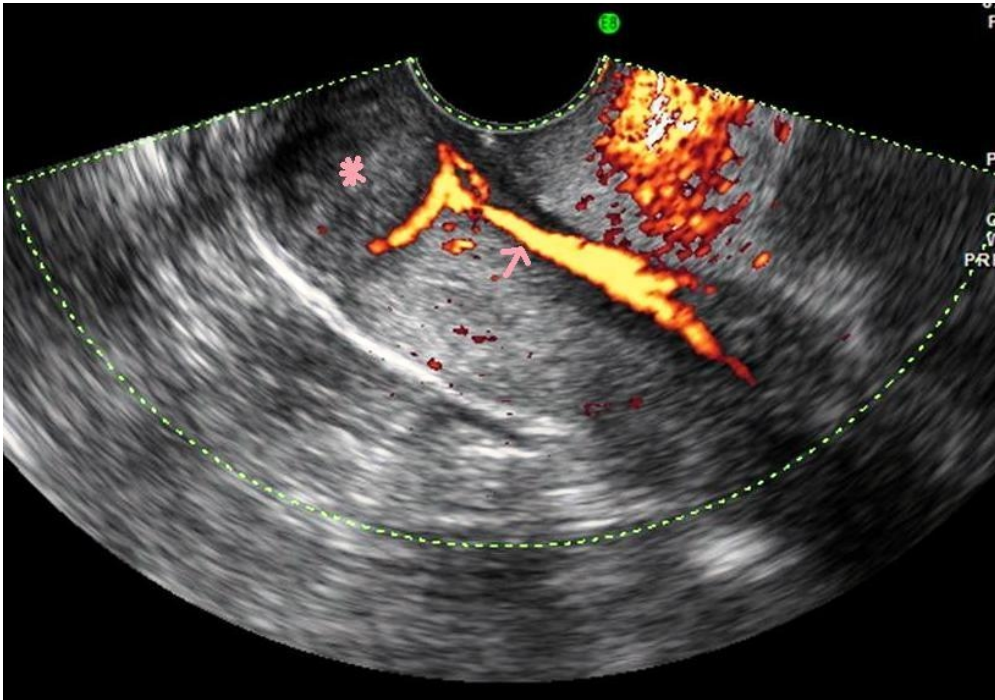
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Description: Normal adnexa **Origin:**

Figure 5

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Description: Prolapsed fibroid (asterisk)

Vascular pedicle originates from posterior uterine wall (arrow) **Origin:**