RADIOLOGIC PATHOLOGIC CORRELATION

Uterine remnant: An uncommon finding after transvaginal hysterectomy

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A 48-year-old woman presented to our department with severe abdominal pain of sudden onset; that was increasing in intensity since one week. The patient underwent a vaginal hysterectomy one year ago for bleeding fibroids. A vaginal ultrasound and MRI were performed and showed a subumbilical mass with hemorrhagic contents. A complementary CT scan with oral and IV contrast showed that the mass was abutting the broad ligaments thus narrowing the differential to exclude the gastrointestinal origin. The patient was sent to surgery. A uterine remnant was found and confirmed histologically.

Introduction

Transvaginal hysterectomy is gaining a better place over the abdominal hysterectomy. Besides the cosmetic point, it is superior to the abdominal way in terms of shorter hospitalization time, lower costs and faster recovery, however it needs experienced and trained gynecologists. Radiologists should know technical procedure and complication of vaginal approach even if less frequent than abdominal hysterectomy.

Case review

We report a case of a 48-year-old multiparous woman who presented for acute abdominal pain since one week. The patient had appendectomy at age of 7 and a transvaginal
Pelvic magnetic resonance imaging showed an atypical subumbilical mass on sagittal T2-weighted spin-echo image (a) with hemorrhagic portion on axial T1 fat-saturation weighted image (b) and solid enhanced part on axial T1 fat-saturation (c).

The patient had no fever and her laboratory and urinary tests were normal.

The abdominopelvic ultrasound showed no abnormality within the liver, the pancreas or the kidney. However, it showed a solid subumbilical median mass of undetermined origin.

The magnetic resonance imaging showed a 6 cm supravesical heterogenous mass with tissular parts and hemorrhagic center and a strongly enhancing peripheral ring (Fig. 1).

Finally a computed tomography with oral contrast was performed confirming the uterine origin of the mass and its contact with the broad ligaments (Fig. 2).

Surgical removal was performed and histological findings confirmed a uterine remnant (Fig. 3).

Discussion

The ratio of transvaginal hysterectomy is 1/3 in the US versus 1/1.4 in France over abdominal hysterectomy [1]. During a vaginal hysterectomy, the surgeon detaches the uterus from the ovaries, fallopian tubes and upper vagina, as well as from the blood vessels and connective tissue that support it. The uterus is then removed through the vagina.

Evidence shows that transvaginal procedure offers advantages with regards to shorter time in the hospital, shorter operative time, lower cost and faster recovery than an abdominal hysterectomy. Vaginal route is actually the recommended way for the treatment of benign uterine
pathologies with the restriction of commonly accepted contraindications. It generally requires uterine morcellation.

This technique is preferable in obese patients and it is less recommended in the following cases: no prolapse, nulliparity or need for oophorectomy associated [2]. It also requires highly trained and skilled surgeons.

Understanding the pelvic/periumbilical anatomy and the differential diagnosis of atypical pelvic masses is mandatory and the key for the correct diagnosis. Some radiologic signs are helpful in determining tumor origin. Type of deformation or compression of adjacent organ may suggest the origin of the mass. Herein, uterine origin of the mass was not evident because of the previous vaginal hysterectomy. The best key to arriving to the diagnosis in our case was to determine feeding structures like ligament that connects the sides of the mass to the walls and floor of the pelvis.

Other differential diagnosis were discussed but were less likely:

- although gossypiboma is rarely seen in daily clinical practice, it should be considered in the differential diagnosis of abdominal/pelvic masses in patients who underwent laparotomy. The prevention can be achieved by meticulous count of surgical sponges and by routine use of textile materials impregnated with a radio-opaque marker [3];
- among all umbilical disorders, the most common congenital urachal abnormality is urachal cyst. Urachal tumors are very rare tumors representing 0.5% of all bladder neoplasms. They usually manifest with suprapubic and hematuria [4];
- gastrointestinal stromal tumors (GISTs) are the most common mesenchymal tumors to arise from the gastrointestinal tract. They arise in patients between 40 and 70 years old and are large at presentation nearly 10 cm long. They consist on heterogeneous and exophytic masses. A Carney triad is mentioned when associated with pulmonary chondromas and paragangliomas [5];
- pelvic endometriosis is defined as the presence of endometrial glandular tissue outside of the uterus.

Hemorrhagic portions are in favor of an endometriosis lesion but it is rare to find such a large isolated mass without sign of pelvic adhesion or involvement of adjacent organs [6].

Conclusion

We report the case of uterine remnant revealed by sudden onset of pain one year after vaginal hysterectomy. Due to the increase of this surgical technique radiologists should be familiar with the principle of the vaginal route and potential complications.

Disclosure of interest

The authors have not supplied their declaration of conflict of interest.

References