Acknowledgement

Patient consent form has been completed and signed by the patient.

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Uterus-like mass: A case report

Dear Editors,

We report a case of a uterus-like mass. A 28-year-old nulliparous patient presented with increasing dysmenorrhea after discontinuing use of her contraceptive pill. Clinical examination revealed pelvic pain mainly located in the right iliac fossa. A pelvic ultrasound displayed a suspicious uterine mass initially described as a pseudo-unicorn uterus with a rudimentary horn. Magnetic resonance imaging (MRI) revealed a roundel image within the right myometrium appearing to have a cleavage plane with the myometrium. This suggested a uterus-like mass, showing hypersignal T1 and hyposignal T2 with discreet hypersignal in the center linking to a hemorrhagic content without communication to the uterine cavity (Fig. 1).

Abdominal examination through a coelioscopy showed no abnormalities. Uterus size and aspect were normal aside from an arch on the right side under the broad ligament. Incision was performed and no area of a cleavage plane was identified. Brown liquid evacuated from the mass alluding to a hematoma. The mass was removed and sent for histological examination. Patient showed no recurrence of pelvic pain or dysmenorrhea during follow-up. Histopathological examination described an endometrium with rich cellular cytogenetic chorion and oval glands lined with a cylindrical coating associated with smooth muscle cells, confirming diagnosis of a uterus-like mass.

A uterus-like mass is a rare, benign tumoral pathology first described in 1981 by Cozzuto [1]. It is defined by an ovoid structure with a central cavity bordered by endometrium and surrounded by a thick wall of smooth cells imitating normal myometrium. Literature is scarce and masses are mainly found within the pelvic cavity, affecting many generations of women, such as young women with early onset puberty or menopausal women. A uterus-like mass can also be located outside the pelvic cavity in other organs (abdominal wall, small and large bowel, mesentery, pancreas, liver, appendix, spinal cord) [2,3].

Preoperative diagnosis is difficult due to lack of specificity of both clinical and paraclinical investigations and is made through observation of pelvic pain and dysmenorrhea. Pelvic imaging typically describes an ovoid lesion, well limited, and isointense compared to endometrium with a hypointense junction without communication to the uterine cavity [4]. The central cavity shows hypersignal T2. Only histopathological examination can confirm diagnosis. Uterine malformation is the principal differential diagnosis (pseudo-unicorn uterus, unicervical unicorn with rudimentary contralateral and blind horn) but also defines other benign or malignant tumors, such as a hamartoma, teratoma, fibroma, sarcoma, and endometrioid carcinoma. It is particularly difficult to differentiate cystic adenomyoma from a uterus-like mass. It is organized around a cystic hemorrhagic cavity but without the organoid organized structure specific to a uterus-like mass.

Surgical treatment is key for removal and diagnosis of the mass. Resection should be complete to prevent recurrence, and minimally invasive. If there is no cleavage plane, dissection can be difficult.

Histopathogenesis is poorly understood and no theory explains all diseases. The theory of congenital malformation has been described due to concomitant malformations of the genitourinary tract and would imply a fusion defect or a duplication of Müller's canals. The theory of metaplasia, which Cozzuto postulated, explains that secondary coelomic pluripotent mesenchymal cells, belonging to the secondary Müllerian system, differentiate into endometrial

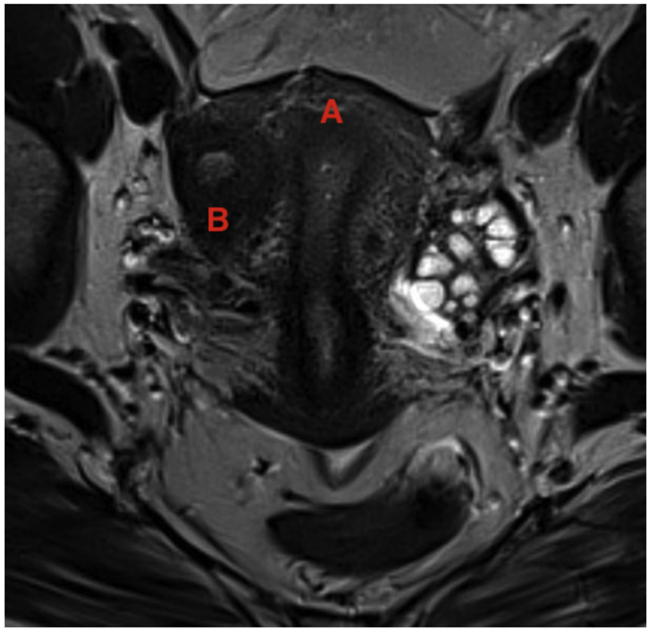

Fig. 1. MRI in frontal section in T2 sequence: A: uterus with hypersignal T2; B: right lateral-uterine mass not communicating with the endometrial cavity.

and smooth muscle cells under hormonal stimulus [1]. This does not explain ileum or spinal localization. Peterson et al. suggested the concept of heterotopy and müllerian choristoma [2], which defined müllerianosis as a heterotopic organoid structure of embryonic origins composed by Müllerian tissue residues. It can be incorporated alone or in combination into other normal organs during organogenesis [5]. In our case, the uterus-like mass was located in the broad ligament and could correspond to a mesenchymal cell metaplasia or a Müllers choristoma.

We present a case of a uterus-like mass, which is a rare benign tumor pathology, healed by surgical treatment.

Contribution

All authors participated in the design, implementation of the study, and read the final manuscript.

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