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CLINICAL CASE

Uterine tumor resembling ovarian sex cord tumors (UTROSCT)

Ana Domínguez-Merino[1], Jesús A. Vergara-Vargas[1], Paola Limón-Gutiérrez[1], José M. Ortega-Solar[1], Andrea Castro-Sanchez[1,2,3], Danery Valdez-Ocrospoma[4], and Carlos H. Salinas-Viquez[5]*

[1]Research Service; [2]Medical Oncology Service. Unidad Médica Onco-Hematológica; [3]Medical Oncology Service; [4]Oncological Pathology and Molecular Pathology Service; [5]Gynecological Oncology Service. Hospital Ángeles de Puebla. Heroica Puebla de Zaragoza, Puebla, Mexico

Abstract

Tumors that resemble sex cord cells are rare neoplasms with non-specific clinical presentation that poses a challenge to diagnosis. A case report is presented of a 49-year-old patient who presented with abnormal uterine bleeding and pelvic pain with diagnosis of uterine tumors resembling ovarian sex cord tumors (UTROSCT). The objective of this study is to contribute to medical knowledge of a rare pathology. A case report was carried out under the CARE guidelines with a review of the literature. As conclusion, the diagnosis and treatment of UTROSCT does not have standardized guidelines; however, what is described in the literature proposes the surgical approach as a fundamental pillar of treatment.

Keywords: *Uterine neoplasm. Gynecological cancer. Case report.*

Introduction

Tumors reminiscent of sex cord cells are rare neoplasms described for the 1st time in 1945, whose epidemiology, diagnosis, treatment, and prognosis are currently a challenge, as there are 511 cases reported in the literature[1,2]. In terms of epidemiology, they are common neoplasms in premenopausal and postmenopausal stages, with an average presentation in the fourth and fifth decade of life, with atypical presentations in young women[1]. They have an atypical clinical presentation, with abnormal uterine bleeding being the most common symptom associated with pelvic pain and/or abdominal heaviness[1], with the most common differential diagnoses being leiomyosarcoma, adenocarcinoma, endometrioid sarcoma, and tumor metastasis of the sexual cords of the ovary.

Given the clinical presentation, the initial approach includes pelvic ultrasound, in which the most common finding is usually an enlarged uterus at the expense of leiomyomas or polyps[2]. The definitive diagnosis is made with the histopathological study, which divides tumors that resemble the cells of the sexual cords into two types. Type 1, endometrial stromal tumors with elements of the sex cords (ESTSCLE) and Type 2, uterine tumors resembling ovarian sex cord tumors (UTROSCT)[3]. As a complementary study, immunohistochemistry evaluates the expression profile, with 4 basic stains that include calretinin, inhibin, CD99, and melan-A, where calretinin positivity associated with another of the three stains is considered diagnostic[4,5]. The diagnostic approach is not standardized; however, the literature proposes surgical management as a pillar

***Correspondence:**
Ana Domínguez-Merino
E-mail: anadomm04@gmail.com

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of treatment[1-3]. A case report of a UTROSCT based on CARE guidelines is presented.

Case presentation

We present a 49-year-old female patient with a personal history of umbilical hernia 12 years ago, insomnia of 1 year treated with clonazepam and quetiapine, as well as an oncological family history. Within the obstetric gynecological history, it was reported as G3A1C2, the cause of the abortion being an anembryonic pregnancy. She went to the gynecological clinic complaining of hyperpolymenorrhea associated with pelvic pain. Physical examination revealed a bimanual pelvic examination with tenderness in the lower abdomen, without the presence of inguinal or supraclavicular nodes.

Pelvic ultrasound was performed with a 77 mm fibroid-like lesion (Fig. 1), and surgical management with total abdominal hysterectomy was decided. During surgery, a well-defined, semi-firm, semi-firm, uterine-dependent exophytic tumor is resected, as well as a biopsy of the right and left peritoneum. The surgical specimen was sent to the transoperative pathological anatomy reporting UTROSCT with extensive areas of necrosis, as well as uterine wall involvement with perforation of the lower uterine segment, no evidence of lymphovascular invasion, and peritoneal biopsies without the presence of infiltration, tucked lymph nodes, and metastases at an undetermined distance. Therefore, surgical treatment was completed with total hysterectomy with bilateral salpingo-oophorectomy, peritoneum biopsy, and omentum (Fig. 2). Subsequently, immunohistochemistry was performed with the following findings: desmin+, WT1–, and BLC2+. Adjuvant therapy with BEP in 4 stages is chosen. Patient is currently alive, under follow-up by imaging techniques.

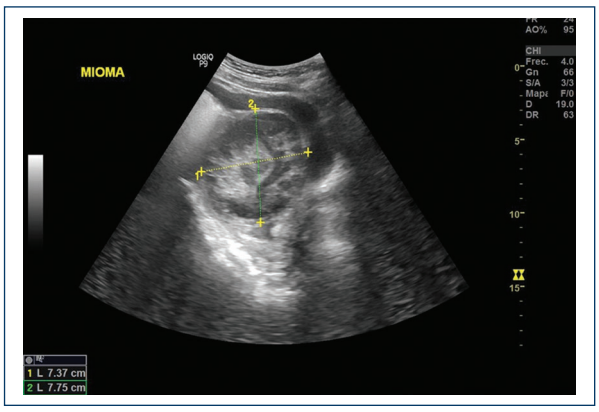


Figure 1. Ultrasound of uterine fibroid reporting a discretely increased echogenicity is heterogeneous, conditioned by the presence of hypoechogenic mitomaniac that contacts the endometrium and posterior chart of 73 × 77 mm.



Figure 2. Uterine tumor resection (285 g) with definitive diagnosis of uterine tumor, like the sexual cord tumor of the ovary (UTROSCT) with extensive necrosis (50%).

Discussion

Uterine tumors reminiscent of the cells of the sexual cords are a rare entity whose diagnostic and therapeutic approach is controversial. Given their low prevalence and clinical presentation, they are usually misdiagnosed initially, with the main differential diagnoses being leiomyoma, adenocarcinoma, endometrioid carcinoma, among others[1-3], as in the present case, where the initial diagnosis was a uterine fibroid of 77 mm. It is a more common oncological pathology in perimenopausal or postmenopausal women, with a clinical picture that encompasses a series of non-specific signs and symptoms, the main ones being abnormal uterine bleeding, abdominal heaviness, and pelvic pain[1,2]. In the present case, we are talking about a woman in perimenopause with abnormal uterine bleeding associated with pelvic pain.

Although the definitive diagnosis requires histopathological study, the initial approach is carried out with imaging studies. Surgical resection and its transoperative histopathological study reduce the rate of false cases[1]. The histopathological study of the lesion allows differentiating between the two types of neoplasms based on the number of elements of the sexual cords, Type 1 and Type 2. Type 1 tumors refer to endometrial stromal tumor with sex cord-like elements (ESTSCLE), which have a much higher malignant potential than those of Type 2, defined as UTROSCT[1]. The histopathological study includes microscopic features and

immunohistochemical markers. Among the most frequent microscopic findings are the presence of mitosis, atypical, and nuclear polymorphism, however, the presence of lymphovascular invasion and necrosis was lower[3]. The present case was reported with areas of extensive necrosis (50%) and the presence of neoplastic cells with 90% Ki-67 expression, which is usually taken as a marker of high malignant potential.

On the other hand, there is a series of immunohistochemical markers for UTROSCT, which include calretinin, inhibin, CD99, and melan-A, which allow the definitive diagnosis of the lesion with the positivity of calretinin and another of the three stains[1]. The histopathological result of the current case report reported: positive calretinin in 95.8%, inhibin 48%, CD99 with weak positivity, and melan-A of 85%, granting a definitive diagnosis of UTROSCT.

Regarding management, literature places surgical management as a fundamental pillar; however, the procedure of choice has not been defined. Although hysterectomy with double salpingo-oophorectomy could be the one of choice, the literature reports that there is no significant difference in disease-free time compared to isolated hysterectomy[3], so reproductive desires play a role in the final decision, always assessing the risk factors and clinical status of each patient[2].

Finally, poor prognostic factors have been described, such as advanced age, presence of pelvic pain, tumor size > 10 cm, cervical stromal involvement, presence of necrosis, distant metastasis, and lymphovascular invasion[2-4]. Therefore, in selected cases, adjuvant treatment with hormonal therapy or chemotherapy is proposed[2]. The reported patient was surgically treated with total hysterectomy and bilateral salpingo-oophorectomy, as well as peritoneal and omentum biopsies. In addition, due to the poor prognostic factors she presented, adjuvant treatment based on chemotherapy with a BEP scheme for four cycles was granted.

Conclusion

Tumors reminiscent of sex cord cells are rare and studied neoplasms; they have been associated with a low malignant potential and low recurrence rate. However, there is not enough information to classify them as neoplasms of low malignant potential. Although there is no standardized therapeutic approach, the resection of the lesion is currently considered the mainstay of treatment, whose technique will depend on the clinical condition of the patient, as well as her risk factors.

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Conflicts of interest

The authors declare no conflicts of interest.

Ethical considerations

Protection of human subjects and animals. The authors declare that the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation and with the World Medical Association and the Declaration of Helsinki. The procedures were authorized by the Institutional Ethics Committee.

Confidentiality, informed consent, and ethical approval. The authors have followed their institution's confidentiality protocols, obtained informed consent of the patient, and secured approval from the Ethics Committee. SAGER guidelines have been followed as applicable to the nature of the study.

Declaration on the use of artificial intelligence. The authors declare that no generative artificial intelligence was used in the writing or creation of the content of this manuscript.

References

1. Watrowski R, Palumbo M, Guerra S, Gallo A, Zizolfi B, Giampaolino P, et al. Uterine tumors resembling ovarian sex cord tumors (UTROSCTs): a scoping review of 511 cases, including 2 new cases. Medicina (Kaunas). 2024;60:179.
2. Santana-Suárez MA, Ocón-Padrón L, Lubrano-Rosales A, Andújar-Sánchez M, Seara-Fernández S. Uterine tumors resembling ovarian sex cord tumors (UTROSCT): case report and review of the literature. Prog Obstet Ginecol. 2019;62:389-93.
3. Blake EA, Sheridan TB, Wang KL, Takiuchi T, Kodama M, Sawada K, et al. Clinical characteristics and outcomes of uterine tumors resembling ovarian sex-cord tumors (UTROSCT): a systematic review of literature. Eur J Obstet Gynecol Reprod Biol. 2014;181:163-70.
4. Sato M, Yano M, Sato S, Aoyagi Y, Aso S, Matsumoto H, et al. Uterine tumor resembling ovarian sex-cord tumor (UTROSCT) with sarcomatous features without recurrence after extended radical surgery: a case report. Medicine (Baltimore). 2020;99:e19166.
5. Fuertes L, Santonja C, Kutzner H, Requena L. Immunohistochemistry in dermatopathology: a review of the most commonly used antibodies (part I). Actas Dermosifiliogr. 2013;104:99-127.