Case Report

Abdominal Wall Endometrioma after Cesarean

Abstract

Background: Endometriosis is defined as the presence of endometrial tissue, glands or stroma, outside the endometrial uterine area. Ectopic tissue has been reported in extrapelvic locations such as the brain, soft tissues, and even the thorax. The incidence after a cesarean section is 0.03-0.45%. Abdominal wall endometrioma usually presents in patients as a tumor close to the surgical scar that causes colicky pain, dyspareunia, dysmenorrhea. As treatment, complete excision with margins is recommended.

Study design: Case Report

Case presentation: A 45-year-old female patient found in the emergency room due to intense abdominal pain, which is increased with menstruation. This pain has been going on for the last 5 years. An abdominal tomography was made, finding an image towards the rectus abdominis. It was decided to schedule surgery, the tissue was sent to pathology to confirm the diagnosis. The pathology report concluded endometrioma of the abdominal wall.

Discussion: Since 1860 when it was first described, about 40 years have passed before soft tissue endometrioma was described for the first time, this condition has a low incidence, causing it to be underdiagnosed, the diagnosis is usually late with a large evolution between onset of symptoms and diagnosis due to lack of suspicion and low knowledge on the subject, the multiple differential diagnoses such as abdominal wall hematoma, granuloma, desmoid tumor makes it difficult to diagnose, as an example our patient was treated as an hematoma and later attributed to pain of psychological origin. The diagnostic triad includes cramping pain related with menstruation, history of gynecological surgery and tumor near the scar, all present in our case. Surgical treatment has been described as the gold standard, performing an excisional biopsy with free margins to avoid recurrence, as it was done in this case.

Conclusion: Endometrioma is a rare condition, with a wide variety of differential diagnosis causing a late diagnosis. Expertise is required when making differential diagnoses. It is important to refer to a gynecologist after diagnosis to assess concomitant endometriosis.

Keywords*: Endometrioma, Endometriosis, Abdominal Wall, Endometrial tissue*

1- INTRODUCTION

Endometriosis is defined as the presence of endometrial tissue, glands or stroma, outside the endometrial uterine area, the most common locations include pelvis, ovaries, Douglas fundus, uterosacral ligaments, peritoneum, intestine, and rectovaginal fascia. Atypical

extrapelvic locations, include brain, urinary tract, gastrointestinal system, soft tissues, and even in the thorax.
With a reported incidence of 3 to 15% in women of childbearing age and in 70% in women with persistent pelvic pain. (1–5)
Endometriosis was first described in 1860 by Von Rokitansky, later in 1899 it was described in the abdominal wall, although it has been reported that it was until 1903 by Robert Meyer. (3,6)
The most frequent cause theory is the implantation of ectopic tissue during gynecologic or obstetric procedures, with posterior hormonal stimulation by estrogens, which promotes the proliferation leading to a solid tumor. Another theory is that neighboring tissue can generate cellular metaplasia as a result of pluripotent cells. Another theory is the lymphatic or vascular pathway where endometrial tissue can reach the area of a surgical scar, forming cicatricial endometriosis. Some cases of endometriomas have even been reported at the trocar site after laparoscopy. (1,7,8)
Incidence reports of endometriomas after cesarean section reach up to 1.8%. (9)
The incidence of post-incisional endometriosis after a cesarean section is 0.03-0.45% up to 1.7%, after an abortion in the 2nd trimester it is 1%, being a rare pathology. (1,3,10,11).
The history and physical examination in these patients is usually a tumor close to a surgical scar that generates colicky pain, dyspareunia (21%), and dysmenorrhea (42%). (1,3,7)
The diagnostic tests are controversial, due to its rare condition, the diagnosis is usually made only after surgical excision and histopathological examination, making diagnosis before surgery has been achieved only in 20-50% with the help of studies. (1–3,6,8,10)
Aponeurosis and subcutaneous tissue involvement has been observed as the main sites of involvement. (12)
As treatment, complete excision with 1 cm margins is recommended, recurrence is usually rare. Although treatment with medical therapy such as danazol, gonadotropin-releasing hormone analogues, or progesterone has been described, they usually have a partial effect and when treatment is discontinued, they often recur, dual treatment with surgery and post-surgical medications has been recommended. (1–3,5,10)

2- CASE REPORT

A 45-year-old female patient who consulted the emergency room due to a 5-year-old picture of intense abdominal pain that has been increasing, accompanied by nausea that impairs her daily activities.
Her personal medical history includes systemic arterial hypertension of 5 years of evolution in treatment with telmisartan, no known allergies, surgical history a cesarean section 5 years ago without apparent complications. She denies having had any trauma in the painful area, and no other relevant psychosocial history. She has no relevant family history.
The patient reports an onset of the condition 5 years ago with intermittent abdominal pain that increases with physical activity and during her menses, later the pain increases starting 1 week before menstruation and lasting up to 1 week post menses.
On this occasion, she came due to intense abdominal pain, an abdominal CT scan was made, the examination showed widening of the left anterior rectus muscle with central hypodensity that does not exceed the limits of the muscular fascia and remains fusiform in shape. Located towards the lower third of the left rectus.

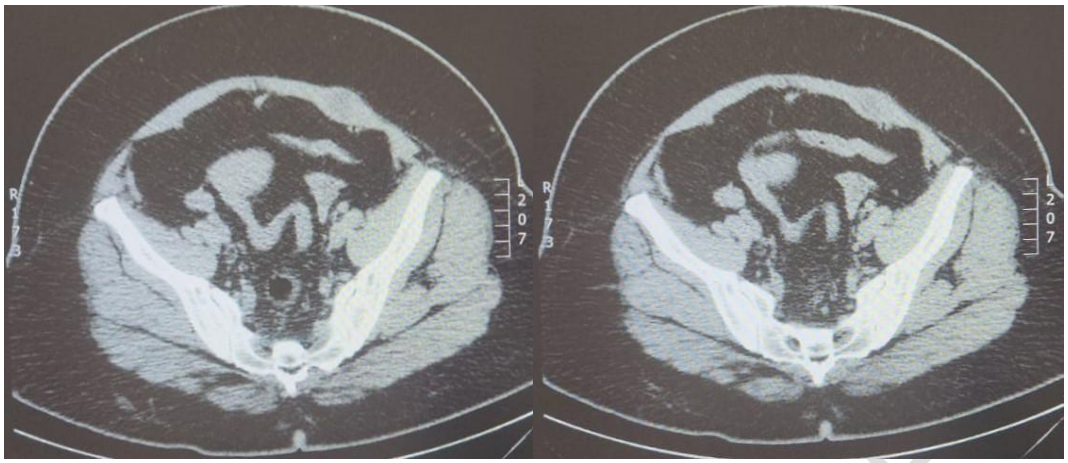
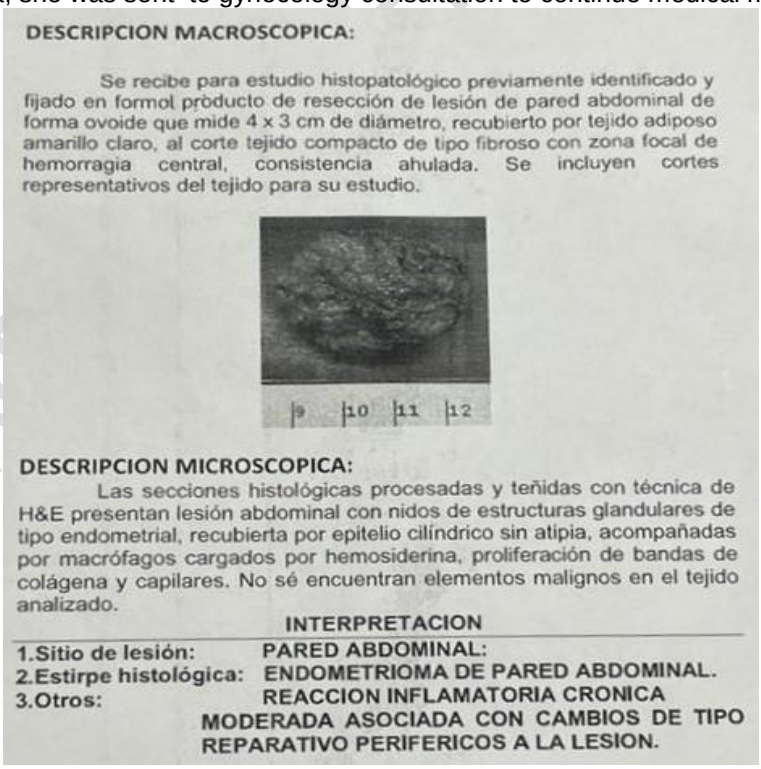


Fig. 1. Axial CT showing a tumor in the left rectus abdominis, located in the lower third. Source: Direct.

Due to persisting with severe abdominal pain, it was decided to schedule an open excisional biopsy, which was performed without complications, removing the totality of the tumor. Macroscopically described as an oval tumor with a diameter of 4x3 cm covered with adipose tissue, fixated to the surrounding muscle, a rubbery consistency, and a central hemorrhagic zone.

The patient progresses with adequate evolution, it is decided to be discharged the next day, she comes to her check-up a week later showing at the physical examination without complications. The histological result confirming the diagnosis of abdominal wall endometrioma, she was sent to gynecology consultation to continue medical management.



DESCRIPCION MACROSCOPICA:

Se recibe para estudio histopatológico previamente identificado y fijado en formol pròducto de resección de lesión de pared abdominal de forma ovoide que mide 4 x 3 cm de diámetro, recubierto por tejido adiposo amarillo claro, al corte tejido compacto de tipo fibroso con zona focal de hemorragia central, consistencia ahulada. Se incluyen cortes representativos del tejido para su estudio.

9 10 11 12

DESCRIPCION MICROSCOPICA:

Las secciones histológicas procesadas y teñidas con técnica de H&E presentan lesión abdominal con nidos de estructuras glandulares de tipo endometrial, recubierta por epitelio cilíndrico sin atipia, acompañadas por macrófagos cargados por hemosiderina, proliferación de bandas de colágena y capilares. No sé encuentran elementos malignos en el tejido analizado.

INTERPRETACION

1.Sitio de lesión:	**PARED ABDOMINAL:**
2.Estirpe histológica:	**ENDOMETRIOMA DE PARED ABDOMINAL.**
3.Otros:	**REACCION INFLAMATORIA CRONICA MODERADA ASOCIADA CON CAMBIOS DE TIPO REPARATIVO PERIFERICOS A LA LESION.**

Fig. 2. Pathology report where an endometrioma of the abdominal wall is observed. Source: Direct.

3. DISCUSSION

In women of reproductive age, an important cause of persistent pelvic pain is usually endometriosis, which is usually intrapelvic, found mainly in the ovaries.(1-5)

Since 1860 when it was first described, about 40 years have passed before soft tissue endometrioma was described for the first time, being a rare diagnosis, it is hard to diagnose because of the lack of knowledge on the subject, leading to be underdiagnosed, and when diagnosed, the diagnostic is made late with most patients as occurred with our patient. (3,6)

Among the theories of endometrioma of the abdominal wall, those that speak of cellular metaplasia in pluripotential cells in the soft tissues or cell migration through the lymphatic or vascular route have been described, however, currently the most accepted has been direct mechanical implantation, which with the help of hormonal stimulation generates cell growth to form an endometrioma, as probably occurred in this case, after the cesarean section made 5 years ago, there was an inoculation of endometrial tissue in the rectus abdominis, this being a highly vascularized organ it was ideal for its formation. (1,7,8)

However, the diagnosis is difficult, as there are multiple differential diagnoses and it can be confused with a hematoma, granuloma or desmoid tumor, as happened to our patient, since during its evolution, it was suspected from a hematoma to pain of psychological origin. (1)

It is reported that the risk of generating scarring endometrioma after a cesarean section is up to 1.8%. The incidence of incisional endometriosis after a cesarean section is 0.03-0.45% up to 1.7%, after an abortion in the 2nd trimester it is up to 1%, being a rare pathology, although some believe that it is underdiagnosed. (1,3, 9,10,11).

Ectopic pregnancies, tubo-ovarian occlusion, laparoscopy, amniocentesis, appendectomy, episiotomy, vaginal hysterectomy and hernioplasty, heavy menstrual flow, alcohol consumption, increased body mass index, and hysterectomy have been described as risk factors, being this last one the most important. On the other hand, multiparity is controversial because it has been described as a protective factor, however, in some reports, it has also been described as a risk factor. These risk factors tend to be prevalent in our environment, since obesity, excessive alcohol consumption and a history of previous gynecological surgeries are frequent. (1,2)

A retrospective study was carried out in Taiwan with a single-center review of cases from 1994 to 2006, to look for ways to prevent this condition and find the most frequent locations. It included 22 patients with scarring endometriomas, 60% of the patients were in the 4th decade of life, all due to gynecological surgeries, most with Pfannenstiel-type incisions and found mainly in the corners, 3 patients had multiple lesions, with follow-up from 6 months to 12 years, without recurrence. (7)

The clinic in these patients is usually a tumor close to a surgical scar that generates colicky pain that increases with menstruation (71-96%), in 28% of cases it is not associated with menstruation, the onset of pain has been reported from months to years after surgery, other symptoms are dyspareunia (21%), and dysmenorrhea (42%), a diagnostic triad has been described which includes cramping pain related to menstruation, history of gynecological surgery and a palpable tumor near the scar, our patient fulfilled this triad, the most common cause for patients to come is due to cramping pain related to the menstrual cycle and a palpable mass close to the site of previous gynecologic-obstetric surgery. (1,3,7)

It is reported that the palpable mass can be fixed to deep planes in 88%, as it occurred in our case, also it can be mobile in 11%. (11)

This condition has been described in computed tomography scans as a circumscribed solid mass with areas of hemorrhage, in some cases fine needle biopsy has been used, however, magnetic resonance imaging has been described as the best study in these cases. Care should be taken with the use of fine needle aspiration biopsy because of the risk of new implants at the puncture site. This presentation generates a delay in the diagnosis of several years, reporting from 1 to 32 years. The measurement range reported is from 4 to 14 centimeters. The median age at diagnosis is in the fourth decade of life. In our environment having access to a magnetic resonance is hard, so a simple abdominal tomography was performed, showing an image compatible with the findings described in the literature. (1–3,6,8,10)

Ultrasound is the first line imaging test, reports describe this pathology as an hypoechoic mass with peripheral vasculature on color Doppler, but it is reported to have a pre-surgical diagnostic failure of 55.5%. (11)

The aponeurosis and the subcutaneous cellular tissue are usually the main affected, being up to 46% to 70% of the cases, being implanted mainly in the corners, the endometrium has been found more frequently in the Pfannenstiel incisions (our case included), due to being the most used incision in cesarean sections due to its advantages, however, it presents with some disadvantages such as greater blood loss and greater tissue dissection, which may contribute to the pathogenesis, unlike vertical incision, which is less performed every day, comparative studies must be carried out comparing this assertion. (5,12)

Surgical treatment has been described as the gold standard, performing an excisional biopsy with free margins of 0.5 to 1 cm to avoid recurrence, recurrence rates are up to 1 to 7.5%, with clinical importance, the risk factors for recurrence includes size and depth wich where present in our case, a surgery with free margins was made and it was decided to refer to a gynecology clinic to continue post-surgical medical management to avoid recurrence and to rule out other endometriosis locations. Concomitant intrapelvic endometriosis has been reported from 14 to 26%, however, in some studies, lower rates have been found due to the lack of pelvic exploration. (1–3,5,10)

The use of pre-surgical medications is used only for temporary pain management, although in some cases therapies have been used to reduce the size of the tumor and facilitate its resection. In the case of post-surgical treatment, a decrease in recurrence has been observed. (5,8)

The main cause of recurrence has been described as inadequate initial resection, reporting rates for this cause of up to 5-9%. (8,9)

Cases of endometrial cancer in endometriomas of the abdominal wall have been reported with a risk of approximately 1%, however, the prognosis has been described with a 5-year survival of 40%, finding average rates in some studies of 42 months, mainly due to the delayed diagnosis, they are usually observed with the same epidemiology as endometrioma, with a mean age of 46 years, late diagnosis of up to 17 years and a size of 4 to 17 centimeters. being mainly of clear cell lineage, endometrioid, serous and mainly mixed, it has not been found that CA-125 increases in all patients and recurrence has been observed to be high, its treatment is like other cancers, with resection with margins and adjuvant chemoradiation. (3,6,7)

The prevention of this pathology has not been described as an important factor, finding small reports on how to prevent it, recommending removing the gauze used in the uterine cavity, not reusing sutures used in the uterus, externalizing the uterus when suturing it, suturing the visceral peritoneum, cleaning the wound from the wall and irrigating with solution before closure and closing subcutaneous dead spaces. (7,11)

4. CONCLUSION

Endometrioma is a rare differential diagnosis that is usually diagnosed late, causing physical discomfort to the patient for months to years. Expertise is required when making differential diagnoses in patients of reproductive age and previous gynecological surgeries. It is important to refer to a gynecologist after diagnosis to assess concomitant endometriosis.

ETHICAL APPROVAL:

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

CONSENT

As per international standard, Participants' written consent has been collected and preserved by the author(s).

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