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ENDOMETRIOMA LOCALIZED IN THE RECTUS ABDOMINIS MUSCLE: A CASE REPORT AND REVIEW OF LITERATURE

Endometrioma localizado no músculo reto abdominal: relato de caso e revisão da literatura

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INTRODUCTION

Endometrial tissue localized outside the uterine cavity is defined as endometriosis. It commonly has been demonstrated in the ovaries, peritoneal surfaces, vagina, scar tissues, cervix, fallopian tubes, rectum, urinary tract, pouch of Douglas and possibly any organ in the abdomen¹⁵. The estimated prevalence reported in literature ranges from 8-15%^{5,9}. Extra-pelvic localization of endometriomas are relatively rare. Especially abdominal wall placements are very infrequent. Usually such cases are associated with surgical scars⁵. The proposed mechanisms that have been put include retrograde menstruation, venous or lymphatic dissemination or metastasis, and mechanical transplantation into scars at the time of surgery⁸.

Herein, is presented a case of endometrioma localized in the rectus abdominis muscle.

CASE REPORT

A 31 year old female with a history of two cesarean sections, the last one of them three years prior, presented with a painful mass in the left lateral side of the Pfannenstiel incision which had been steadily growing. The same patient went a month ago to our institution's urology clinic with pain in the inguinal region. After a detailed history and physical examination an ultrasonography was performed that revealed a 20X12 mm hypo-echoic nodular mass, neighboring the rectus abdominis muscle, with minimal vascularization. The differential diagnosis included endometriosis and a possible desmoid tumor. The patient was referred to our clinic for further evaluation. The pain started on the left lower quadrant and radiated towards the inguinal region, and was associated with menstruation. In physical examination a 2 cm wide mass was palpated in the previously described localization. Magnetic resonance imaging was performed which revealed a 20x11 mm mass which is slightly hyper-intense in the T1 sequence, and contrast enhanced after IV gadolinium injection in the T2 sequence, with increased signal intensity

and nodular appearance in diffusion weighted sequences. These were found to be consistent with an endometrial implant (Figures 1A and 1B). Examination of the uterine cavity showed effusion which was at most 15 mm in width when measured. A little free fluid, indicating peritoneal irritation was present in between the intestinal loops. No pathological lymph nodes were present in the lower abdomen.

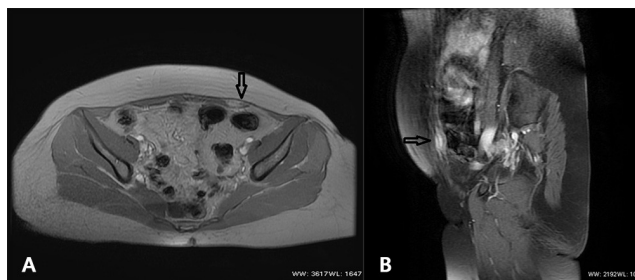


FIGURE 1 - Arrows show the area of endometriosis in rectus abdominis muscle: A) CT scan in transverse section; B) CT scan in sagittal section

The patient was admitted for surgical removal of the mass 2 cm wide fibrotic appearing mass was excised (Figure 2) and was sent for pathological examination. The patient's complaints resolved after the surgery. She was discharged with no complications two days after the operation. Four months after the surgery, the patient came in for a follow-up visit, and had no complaints or complications. Histopathological examination was consistent with glandular structures of the endometrium with accompanying endometrial stroma within muscle and connective tissue (Figure 3).

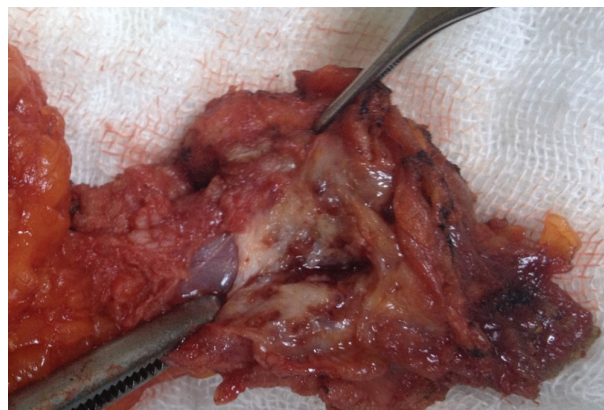


FIGURE 2 - The mass excised in the operation

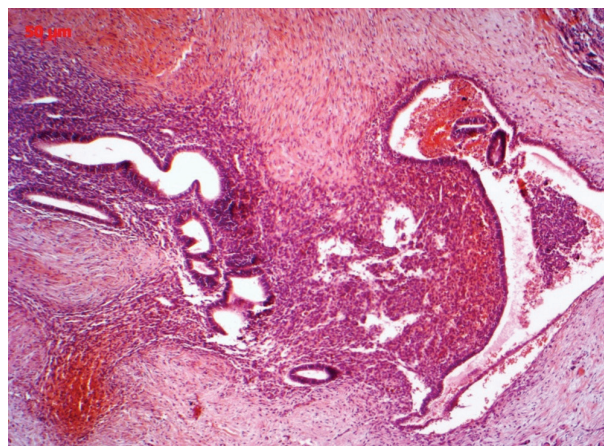


FIGURE 3 - Typical endometrium glands and spindle endometrium stroma existed in the area of endometriosis (H&E, X50)

DISCUSSION

Ectopic endometrial tissue localized in the rectus abdominis tissue is a very rare occurrence. Previously there have been only 20 reported cases in literature⁵. The first one of these cases was presented by Amato et al.², in 1984. Giannella et al.⁷ has reviewed the previously reported cases extensively; their clinico-pathological characteristics, summarized, were: endometriosis with rectus abdominis placement usually is seen in premenopausal women, aged 27-42y, and history of previous surgery (77%), similarly to this patient. The average size of the endometriomas were 4x4 cm in diameter. This case had a much smaller dimension. The imaging studies' measurements were 2 cm at the greatest width. While CT scan has most commonly been used, in this case imaging diagnosis preferred to use ultrasound followed by an MRI⁷. Fine needle aspiration has also been tried in these cases; however, failed to prove effective in establishing diagnosis³.

Cesarean section is very frequently associated with abdominal wall endometriosis. The incidence, as reported in previous literature, can be as high as 1%. One of the proposed theories for how this occurs, takes into consideration the possibility that during the operation, endometrial cells may escape through the incision in the uterus and implant themselves within the abdominal incision site³.

This patient presented with cyclic symptoms that were associated with menstruation. The differential diagnosis of cyclic pain in general include lymphadenopathy, mesenteric lymphadenitis, lipoma, abscesses, hernias, hematomas, soft tissue sarcomas, desmoid tumors (which was considered in differential diagnosis) and even metastatic cancer. Previously some studies have looked into the utility of biochemical markers for tracking endometriosis. These markers include CA-125, C-reactive protein, anti-mullerian hormone, follistatin^{6,11,12,13}.

Previously conducted sonographic studies have determined that abdominal wall endometriomas (which were first demonstrated via ultrasound in 1979¹⁴) are commonly hypo-echoic, well defined, solid masses; this is consistent with sonographic findings of this case¹. Medical treatment for these conditions, which have been previously utilized in literature, include danazol and progesterone; however, this treatment is frequently inefficacious, and therefore must be reserved for cases in which surgical treatment is not preferred¹⁰.

To summarize, in masses which present with cyclic pain and growth, localized to the abdominal surface,

endometriomas must be considered in the differential diagnosis. Surgical removal, as evidenced previously reported cases, is successful, especially when limited and localized within in the rectus abdominis muscle. Sonography followed by resonance, provides the most definitive imaging. Molecular markers are currently not established enough to be considered as a standard of diagnosis. Further large-scale studies or reviews are necessary to determine which approach is the best, with consideration of the patient's request.

REFERENCES

1. Aleem F, Pennisi J, Zeitoun K. The role of color Doppler in diagnosis of endometriomas. *Ultrasound Obstet Gynecol.* 1995 Jan;5(1):51-4.
2. Amato M, Levitt R. Abdominal wall endometrioma: CT findings. *J Comput Assist Tomogr.* 1984 Dec;8(6):1213-4.
3. Bumpers HL, Butler KL, Best IM. Endometrioma of the abdominal wall. *Am J Obstet Gynecol.* 2002 Dec;187(6):1709-10.
4. Calò PG, Ambu R, Medas F et al. Rectus abdominis muscle endometriosis Report of two cases and review of the literature. *Ann Ital Chir.* 2012 Jun 20.
5. Erkan N, Hacıyanlı M, Sayhan H. Abdominal wall endometriomas. *Int J Gynaecol Obstet.* 2005 Apr;89(1):59-60.
6. Florio P, Reis FM, Torres PB. High serum follistatin levels in women with ovarian endometriosis. *Hum Reprod.* 2009 Oct;24(10):2600-6.
7. Giannella L, La Marca A, Ternelli G. et al. Rectus abdominis muscle endometriosis: case report and review of the literature. *J Obstet Gynaecol Res.* 2010 Aug;36(4):902-6.
8. Gunes M, Kayikcioglu F, Ozturkoglu E. Incisional endometriosis after cesarean section, episiotomy and other gynecologic procedures. *J Obstet Gynaecol Res.* 2005 Oct;31(5):471-5.
9. Horton JD, Dezee KJ, Ahnfeldt EP et al. Abdominal wall endometriosis: a surgeon's perspective and review of 445 cases. *Am J Surg.* 2008 Aug;196(2):207-12.
10. Koger KE, Shatney CH, Hodge K. Surgical scar endometrioma. *Surg Gynecol Obstet.* 1993 Sep;177(3):243-6.
11. Lemos NA, Arbo E, Scalco R. Decreased anti-Müllerian hormone and altered ovarian follicular cohort in infertile patients with mild/minimal endometriosis. *Fertil Steril.* 2008 May;89(5):1064-8.
12. Lermann J, Mueller A, Körber F. Evaluation of high-sensitivity C-reactive protein in comparison with C-reactive protein as biochemical serum markers in women with endometriosis. *Fertil Steril.* 2010 May 1;93(7):2125-9.
13. Luisi S, Gabbanini M, Sollazzi S. Surgical scar endometriosis after Cesarean section: a case report. *Gynecol Endocrinol.* 2006 May;22(5):284-5.
14. Miller WB Jr, Melson GL. Abdominal wall endometrioma. *AJR Am J Roentgenol.* 1979 Mar;132(3):467-8.
15. Woodward PJ, Sohaey R, Mezzetti TP. Endometriosis: radiologic-pathologic correlation. *Radiographics* 2001;21: 193-216.