SAS Journal of Medicine
Abbreviated Key Title: SAS J Med
ISSN 2454-5112
Journal homepage: https://saspublishers.com

OPEN ACCESS

Pediatric Radiology

Parietal Endometriosis: Imaging Features of an Unknown Late Complication of Cesarean Section

Keltoum Boumlik[1*], Othmane Jbara[1], Imane Mahdar[1], Laoudiyi Dalal[1], Kamilia Chbani[1], Salam Siham[1]

[1]Service de Radiologie Pédiatrique, Hopital Abderahim Harouchi, Chu Ibn Rochd De Casablanca, Morocco

DOI: 10.36347/sasjm.2022.v08i11.002 | **Received:** 09.07.2022 | **Accepted:** 12.08.2022 | **Published:** 09.11.2022

***Corresponding author:** Keltoum Boumlik
Service de Radiologie Pédiatrique, Hopital Abderahim Harouchi, Chu Ibn Rochd De Casablanca, Morocco

Abstract **Case Report**

Parietal endometriosis is a rare clinical entity; it most often occurs after gynecologic or obstetric surgery. The typical clinical presentation is that of a parietal mass associated with pain punctuated by menstruation. Parietal ultrasonography finds a hypoechoic, heterogeneous formation with internal echoes. Doppler and MRI confirmed the diagnosis of parietal endometriosis. The diagnosis is confirmed by histology. Treatment is essentially surgical and based on the complete excision of the lesion. Through our case, we will emphasize the imaging aspects of this pathology, which will allow the practitioner to make the diagnosis.

Keywords: Abdominal wall endometriosis; abdominal scar; MRI.

INTRODUCTION

Endometriosis corresponds to the presence of functional endometrial tissue ectopically outside the uterine cavity. Its parietal location is rare, and it can occur on all scars, especially after gynecological, obstetric, or abdominal surgery [1, 2].

Endometriosis of the abdominal wall has been described in different locations: the rectus abdominal muscles, the umbilicus [3], cesarean section scars [4], the skin, the adjacent tissues of abdominal or pelvic surgery scars, the path of an amniocentesis needle [5] as well as on the laparoscopy trocar orifice [6].

We report a case of abdominal wall scar parietal endometriosis observed in a young 37-year-old patient, a mother of three children born by cesarean section.

CASE REPORT

Patient aged 37 years, married and mother of 03 children born by cesarean section, the last one was four years ago. The onset of the symptomatology dates back to six months ago with the appearance of cyclic hypogastric pain in which the examination found a swelling in the left rectus abdominal muscle without other associated signs. The parietal ultrasound examination showed an oblong formation, with regular contours, hypoechoic and heterogeneous, with arterio-venous vascularization on the color Doppler, of the lower abdominal wall facing the left side of the cesarean scar.

Pelvic MRI showed an oval tissue nodule at the parietal level, in close contact with the lower third of the left rectus muscle of the abdomen, fairly well limited, in T1 and T2 isosignal, with a discrete diffusion hypersignal measuring 18x10mm, located at 3.5 of the skin plane (Figure 1).

At the end of the clinical and radiological workup, the diagnosis of parietal endometriosis was retained, and the patient underwent transfixing excision of the parietal mass with epiploplasty and cure of the breach with a nonabsorbable plate.

The anatomopathological study confirmed the diagnosis of parietal endometriosis and the short-term evolution did not show any recurrence.

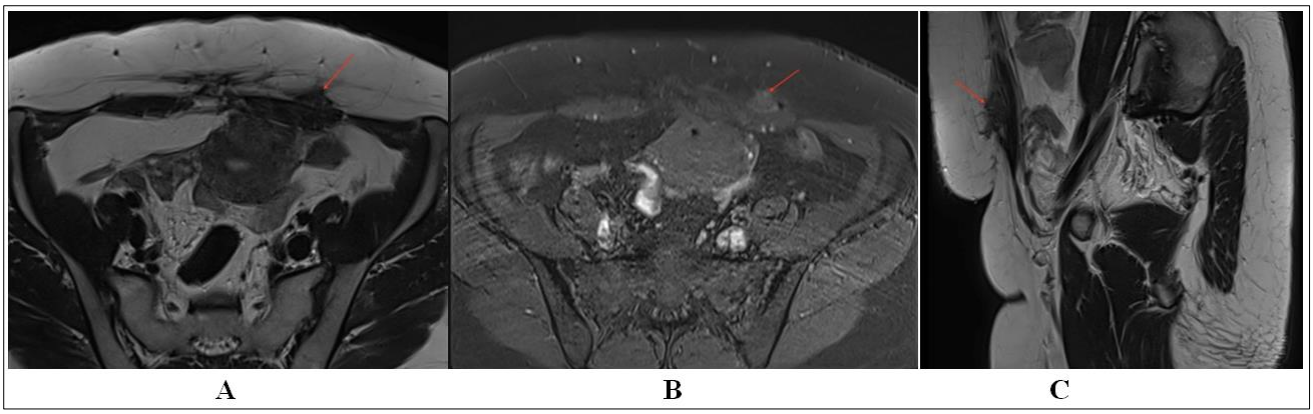

Figure 1: Pelvic MRI: axial T2 sequence (a), T1 Dixon sequence (b), sagittal T2 sequence (C): parietal tissue density formation in contact with the underlying rectus muscle

DISCUSSION

Parietal endometriosis is a rare and often unrecognized entity. It is an ectopic location of endometrial tissue outside the uterine cavity. The majority of cases are secondary to gyneco-obstetric surgery [7].

However, a few cases of primary parietal endometriosis have been reported. Abdominal parietal endometriosis has been described in various locations including the rectus abdominal, umbilicus, cesarean section scars, hysterectomy scars, abdominal-pelvic surgery scars, amniocentesis needle sites, and laparoscopic trocar holes [7, 8].

Several theories have been put forward to explain this ectopic implantation including backflow migration via the tubes, lymphovascular migration theory, and cellular metaplasia [9].

Parietal endometriosis is most often manifested by a mass appearing opposite a scar which increases in volume and becomes painful in a cyclical fashion. The time of onset is very variable; it can range from 2 months to 15 years after the surgical act [8].

The catamenial character, i.e. the exacerbation of these signs during menstruation, is an important element of the diagnosis. It is possible to observe a change in the color of the lesion which becomes bluish and may even fistulate to the skin in the form of a bloody discharge [10].

Palpation of the lesion allows appreciating the size and the localization in-depth, the lesion frequently invades the abdominal muscles and their sheath [10].

In the case of a typical picture, the diagnosis can be easy to evoke. However, it is sometimes more difficult. In 37% of cases [2], the diagnosis is made by anatomical pathology.

Ultrasound is the first-line examination, easy to access, noninvasive, which confirms the presence of the mass, specifies its relationship with the deep plane, its size, its solid nature, and the number of lesions without showing specific signs of parietal l´endometriosis [9, 11].

It is most often a well-limited, tissue-based, hypoechoic mass, but the lesion may be cystic, solid, or mixed; the size of the lesion varies from 5 to 200 mm. Color Doppler often shows a highly hypervascularized mass with dilated afferent vessels [11]. The mass is painful when pressure is applied by the probe.

The CT appearance of subcutaneous endometriosis is in no way characteristic; it is a homogeneous tissue mass that does not take up much contrast after injection because of the poorly vascularized nature of the lesions. This appearance is identical to that of intra-abdominal or pelvic localization [8, 9].

Magnetic resonance imaging (MRI) allows a better definition of the size of the mass, and its relationship with the surrounding structures, especially the deep plane [12]. It allows the detection of multiple localizations and of malignant transformation of a d´endometriosis nodule, especially in a postmenopausal woman with a large nodule [9, 12].

MRI may be more specific in detecting recent bleeding (T1- and T2-weighted hyper-signal), or hemosiderin residue from previous bleeding (T1- and T2-weighted hypo-signal) [1, 2]. The best MRI sequence to detect a parietal endometriotic lesion is the fat-suppressed T1-weighted sequence; on T2 the nodule may be hidden because of the isosignal to muscle [7, 13].

Cytological puncture or, better still, microbiopsy sometimes allows preoperative diagnosis [14].

Medical treatment with LH-RH agonists or progestins has been evaluated, and although it allows improvement of the symptomatology, it does not allow

healing of the lesions, which recur rapidly and systematically when it is stopped [8].

Surgery remains the procedure of choice. Surgical excision must be wide, taking in the entire lesion and passing at least 5 mm into the healthy zone [4, 15]. Parietal reconstruction with parietoplasty may be indicated when the closure of the musculoaponeurotic margins is impossible.

Malignant transformation of endometriosis is rare and is reported to occur in 0.7 to 1% of cases [4, 16].

Prevention in the case of laparotomy is based on abundant washing of the abdominal cavity and the scar at the end of the operation as well as the change of gloves for the time of parietal closure, whereas in laparoscopy, the extraction of the operative parts in a protective bag and abundant washing of the pelvic cavity should be systematic [10].

In our patient, the surgery allowed the healing of the patient, and the short-term evolution did not show any recurrence.

CONCLUSION

Parietal endometriosis is an uncommon and often unrecognized condition, which should be evoked in the presence of any mass located on the scar of an abdominal-pelvic operation with cyclic pain.

The diagnosis is clinical-radiological but is only confirmed by histological study.

The cure is obtained by complete excision of the mass.

REFERENCES

1. Boufettal, H., Hermas, S., Boufettal, R., Jai, S. R., Kamri, Z., Elmouatacim, K., ... & Samouh, N. (2009). Endométriose de cicatrice de la paroi abdominale. *La Presse Médicale*, *38*(1), e1-e6.
2. Merran, S., & Karila-Cohen, P. (2004). Subcutaneous endometriosis on scar of the anterior abdominal wall: apropos of two cases. *Journal of Radiology*, 85 (4), 409-410.
3. Jaouad, K., Abdellah, BH, Mehdi, E., Driss, M., & Mohamed, D. (2010). Umbilical endometriosis: about a case. *Reproductive Medicine*, *12* (4), 324-327.
4. Picod, G., Boulanger, L., Bounoua, F., Leduc, F., & Duval, G. (2006). Parietal endometriosis on caesarean section scar: about 15 cases. *Obstetrics Gynecology & Fertility*, *34* (1), 8-13.
5. Hughes, M. L., Bartholomew, D., & Paluzzi, M. (1997). Abdominal wall endometriosis after amniocentesis. A case report. *The Journal of Reproductive Medicine*, *42*(9), 597-599.
6. Thylan, S. (1996). Re: abdominal wall endometrioma in a laparoscopic trocar tract: a case report. *The American Surgeon*, *62*(7), 617-617.
7. Hafidi, R., Kouach, J., Yakka, M., Salek, G., Oukabli, M., Moussaoui, RD, & Dehayni, M. (2011). Cicatricial endometriosis of the abdominal wall. *Imagery of Woman*, 21 (3), 125-127. doi:10.1016/j.femme.2011.07.005
8. Bouhout, T., Serji, B., Egyir, E. U., El Amri, B., Bouhout, I., Soufi, M., ... & El Harroudi, T. (2018). Abdominal wall endometriosis: about a case. *PAN AFRICAN MEDICAL JOURNAL*, *31*-34. doi: 10.11604/pamj.2018.31.4.10732
9. Elhabachi, B., & Brix, M. (2020). Parietal endometriosis: is magnetic resonance imaging sufficient for surgery? *PAMJ-Clinical Medicine* , *4* (2). Doi: 10.11604/pamj-cm.2020.4.2.24198
10. El Fahssi, M., Lomdo, M., Bounaim, A., Ali, AA, & Sair, K. (2016). Cicatricial parietal endometriosis after caesarean section: a rare entity. *Pan African Medical Journal*, *24* (1). https://doi.org/10.11604/pamj.2016.24.79.8680
11. Francica, G., Giardiello, C., Angelone, G., Cristiano, S., Finelli, R., & Tramontano, G. (2003). Abdominal wall endometriomas near cesarean delivery scars: sonographic and color doppler findings in a series of 12 patients. *Journal of Ultrasound in Medicine*, *22*(10), 1041-1047.
12. Busard, M. P., Mijatovic, V., van Kuijk, C., Hompes, P. G., & van Waesberghe, J. H. (2010). Appearance of abdominal wall endometriosis on MR imaging. *European radiology*, *20*(5), 1267-1276.
13. Kinkel, K., Frei, K. A., Balleyguier, C., & Chapron, C. (2006). Diagnosis of endometriosis with imaging: a review. *European radiology*, *16*(2), 285-298.
14. Simsir, A., Thorner, K., Waisman, J., & Cangiarella, J. (2001). Endometriosis in abdominal scars: a report of three cases diagnosed by fine-needle aspiration biopsy. *The American Surgeon*, *67*(10), 984-986.
15. Kouach, J., Quamouss, O., Moussaoui, D., & Dehayni, M. (2006). Endométriose cicatricielle de la paroi abdominale. *Gynecol Obstet Prat*, *188*, 12-13.
16. Toullalan, O., Baqué, P., Benchimol, D., Bernard, JL, Rahili, A., Gillet, JY, & Bourgeon, A. (2000, November). Endometriosis of the rectus abdominis muscles. In *Annals of Surgery* (Vol. 125, No. 9, pp. 880-883). Elsevier Masson.