

ISSN: 0976-3031

Available Online at <http://www.recentscientific.com>

CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research
Vol. 12, Issue, 09 (x), pp. xx-xxx, September, 2021

**International Journal of
Recent Scientific
Research**

DOI: 10.24327/IJRSR

Research Article

CAESAREAN SCAR ENDOMETRIOSIS

Pragna K and Rajeswari Reddy T

MS OBG, DES(Germany), PGPMAX ((ISB))

DOI: <http://dx.doi.org/10.24327/ijrsr.2021.1209.xxx>

ARTICLE INFO

Article History:

Received xxx, 2021

Received in revised form xxx, 2021

Accepted xxx, 2021

Published online xxx, 2021

ABSTRACT

Endometriosis is defined by the presence of ectopic functional endometrial tissue outside the uterus. Scar endometriosis is explained following obstetric and gynecological surgeries. It is a rare condition. We report cases of scar endometriosis which were diagnosed and managed surgically.

Keywords:

Scar Endometriosis

Copyright © Pragna K and Rajeswari Reddy T, 2021, this is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Endometriosis is the presence of endometrial like stroma and glands outside the uterine endometrium. It occurs mostly in pelvic sites such as ovaries, posterior cul-de-sac, uterine ligaments, pelvic peritoneum, bowel and rectovaginal septum. Extrapelvic endometriosis is found in thorax, urinary tract, gastrointestinal tract and in cutaneous tissues like abdominal wall. Main cause of extrapelvic endometriosis is due to obstetric and gynecological surgeries.

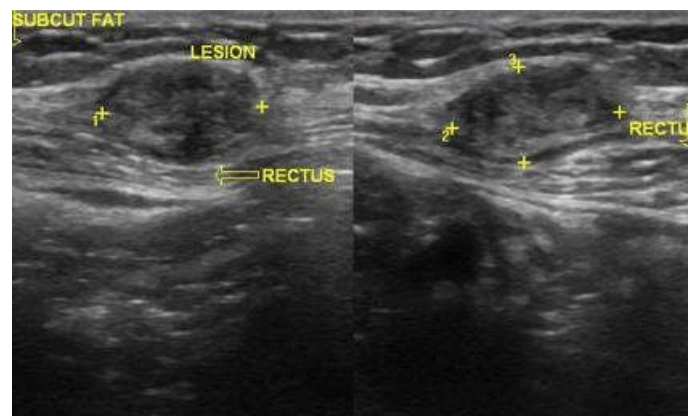
Various theories are attributed to endometriosis amongst which proves scar endometriosis is direct implantation of the endometrial tissue in scars during operation. Due to hormonal stimulus, these cells proliferate and undergo metaplasia which leads to scar endometriosis.

Case report

A 35 year old parous woman presented in February 2021 with complaints of pain and swelling on the caesarean scar for 2 years which has aggravated since 2 months. She had dysmenorrhoea and cyclical pain associated with swelling for past 2 months. She underwent one cesarean delivery 8 years back.

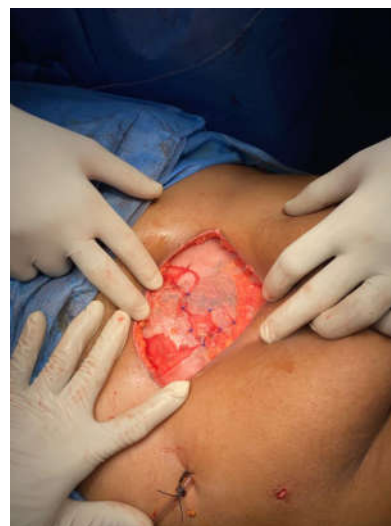
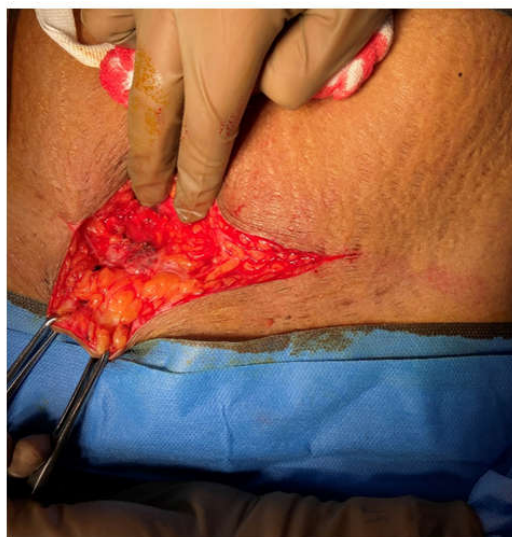
Examination revealed approximately 4 cm wide, tender, immobile mass over caesarean scar. Ultrasound pelvis showed 4.2X2.2 cm heterogenous echotexture area in the subcutaneous plane along the C- section scar in the midline.

Similarly there were other otherpatients of age 32 years, 30 years with complaints of painful mass around the caesarean scar and swelling at one end of scar site respectively. Both the patients were evaluated for scar endometriosis and diagnosed to be the same.



Depending on history and examination findings, most probable differential diagnosis was scar endometriosis, hematoma was considered. Patient was given GnRH and dienogest tablets for a month following which pain didn't subside. Hence she was taken up for abdominal wall mass excision.

*Corresponding author: Pragna K
MS OBG, DES(Germany), PGPMAX ((ISB))

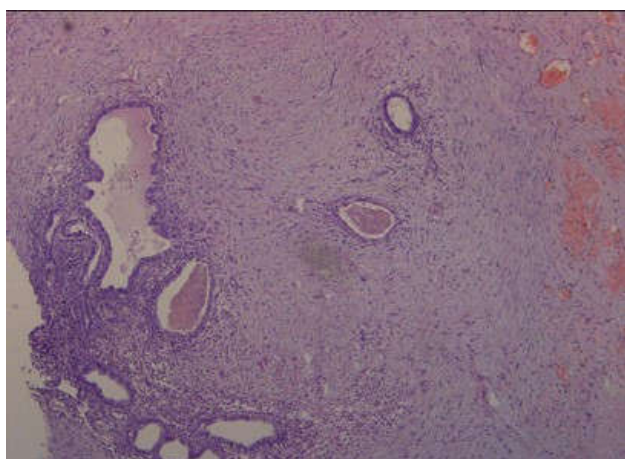


Histopathology of the excised mass



It showed endometrial glands and stroma suggestive of scar endometriosis.

Intraoperative findings: Abdominal Mass was adherent to rectus sheath and muscle and posterior peritoneum. Mass was removed through wide excision and as the defect (5 x 3 cm) could not be closed, hence prosthetic mesh (PROLENE MESH 15x15 cm) was placed and fixed.



DISCUSSION

Endometriosis in caesarean scar is a rare entity. There are only a few publications on caesarean scar endometriosis. The estimated incidence of scar endometrioma ranges from 0.03 to 3.5 % and more frequently observed with an incidence of 0.03 to 0.47 % following cesarean delivery [1, 2].

De Oliveira et al. reported a case-control study to identify the risk factors of scar endometriosis. According to this study, early hysterotomy in pregnancy especially before 22nd week of gestation is the main risk factor [3]. Additionally, increased menstrual flow and alcohol consumption are also concluded as risk factors[3]. The most evident risk factor for the presence of endometriosis in scar tissue is a previous history of obstetric surgical procedures [1].

The possible causes were defined by Wang et al. First of all, obstetric surgery can expose a large amount of endometrial cells, and these cells can be entrapped in the wound [4]. The separation of active cells may be facilitated by amniotic fluid and significantly more blood loss in obstetric surgery would provide a relatively rich nutritional environment for the growth of endometrial tissue in the wound [4]. In this study, more than half of our patients were obese and overweight. Obesity can provide wide surgical surface for the entrapment of endometrial active cells and may be an impact on the illness.

The most common presentation includes palpable subcutaneous mass, typically accompanied by cyclic, non cyclic or constant pain. Menstruation aggravates the disease. Ectopic pregnancies, salpingostomy, puerperal sterilization, laparoscopy, amniocentesis, appendectomy, episiotomy, vaginal hysterectomies, and hernia repair are the other surgical factors for scar endometriosis. Scar endometriosis is usually developed in superficial layers of the connective tissue, and nodules are usually found by palpation. The clinical evaluation can be confirmed by pelvic ultrasonography. Some additional diagnostic procedures such as fine-needle aspiration cytodiagnosis, computed tomography, and magnetic resonance imaging can be performed [5, 6]. The imaging modalities are nonspecific and more useful for differential diagnoses and detecting the relationship between the mass and the other tissues. Use of FNAC is controversial, as some authors have warned against an increased risk of producing new endometriotic implants at the puncture site, as well as viscera injury if the diagnosis is uncertain [7].

When a proper prediagnosis cannot be achieved, scar endometriosis can be easily mixed with other surgical conditions like hematoma, neuroma, hernia, granuloma, abscess, scar tissue, neoplastic tissue, or even metastatic carcinoma

Medical treatment gives only partial relief and with regard to the almost certain recurrence of the condition after cessation of medication [5, 8]. The use of progestogens, oral contraceptive pills, and danazol are not effective [5]. Due to side effects of androgens, patients have poor compliance to these drugs [5].

Treatment of choice is wide excision with at least 1cm margin. As expected, the larger and deeper lesions to the muscle or the fascia are more difficult to excise completely. In large lesions, complete excision of the lesion may entail a synthetic mesh placement or tissue transfer for closure after resection [9].

Mostly, the reported cases have mentioned that the contamination have occurred during surgery that possible contact with endometrial tissue including episiotomy, hysterectomy, ectopic pregnancy, laparoscopy, tubal ligation, and cesarean section [10, 11]. So it is important to take some precautions to avoid transplantation of endometrial cells. To minimize endometriosis contamination, some authors recommend careful isolation of the wall incision and lavage with saline before the closure of the wall [12]. Pfannenstiel incision carries a higher risk of caesarean scar endometriosis than the vertical midline incision. We suggest two possible causes for the favorable role of the Pfannenstiel incision. First, the Pfannenstiel incision involves wider dissection planes and more gaps, rendering tissue irrigation difficult and inducing much more endometrial cell contamination [13]. The second cause is a larger nutrient supply. Due to the longitudinal pattern of the abdominal vessels and the large dissection, more capillaries are cut off during a Pfannenstiel incision than in a vertical incision, causing more blood loss. Endometrial cells require an adequate blood supply to survive in their ectopic sites, and angiogenesis plays an important role in the pathogenesis of endometriosis [14]. Therefore, more blood loss in the Pfannenstiel incision would provide a relatively rich nutritional environment for the implantation and growth of residual endometrial cells, favoring the occurrence of caesarean scar endometriosis. Thorough cleaning at the conclusion of caesarean section, particularly of both corner sites of the adipose layer and the fascia layer, is strongly recommended for caesarean scar endometriosis prevention. The others hypothesized that failure to close the parietal and visceral peritoneum with sutures at the time of caesarean section may markedly increase the postoperative occurrence of an endometrioma in the skin incision scar [15]. Replacing instruments and needles with a new one is recommended when suturing other abdominal layers [16]

Histology is the hallmark of diagnosis. It is satisfied if endometrial glands, stroma, and hemosiderin pigment are seen.

CONCLUSION

Caesarean scar endometriosis is nowadays common finding because of increased rates of caesarean section, hence its our utmost responsibility to prevent its occurrence, thus taking all necessary steps of cleaning the corners of adipose tissue and fascia while doing the caesarean section

Bibliography

1. Leite GK, Carvalho LF, Korkes H, Guazzelli TF, Kenj G, Viana Ade T. Scar endometrioma following obstetric surgical incisions: retrospective study on 33 cases and review of the literature. *Sao Paulo Med J*. 2009;127:270–277. doi: 10.1590/S1516-31802009000500005. [PubMed] [CrossRef] [Google Scholar]
2. Chang Y, Tsai EM, Long CY, Chen YH, Kay N. Abdominal wall endometriomas. *J Reprod Med*. 2009;54:155–159. [PubMed] [Google Scholar]
3. de Oliveira MA, de Leon AC, Freire EC, de Oliveira HC. Risk factors for abdominal scar endometriosis after obstetric hysterotomies: a case–control study. *Acta Obstet Gynecol Scand*. 2007;86:73–80. doi: 10.1080/00016340601099346. [PubMed] [CrossRef] [Google Scholar]
4. Wang PH, Juang CM, Chao HT, Yu KJ, Yuan CC, Ng HT. Wound endometriosis: risk factor evaluation and treatment. *J Chin Med Assoc*. 2003;66:113–119. [PubMed] [Google Scholar]
5. Al-Jabri K. Endometriosis at caesarian section scar. *Oman Med J*. 2009;24:294–295. [PMC free article] [PubMed] [Google Scholar]
6. Francica G. Reliable clinical and sonographic findings in the diagnosis of abdominal wall endometriosis near cesarean section scar. *World J Radiol*. 2012;4:135–140. doi: 10.4329/wjr.v4.i4.135. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
7. G. K. C. Leite, L. F. P. De Carvalho, H. Korkes, T. F. Guazzelli, G. Kenj, and A. D. T. Viana, “Scar endometrioma following obstetric surgical incisions: retrospective study on 33 cases and review of the literature,” *Sao Paulo Medical Journal*, vol. 127, no. 5, pp. 270–277, 2009. View at: Publisher Site | Google Scholar
8. Sengul I, Sengul D, Kahyaoglu S, Kahyaoglu I. Incisional endometriosis: a report of 3 cases. *Can J Surg*. 2009;52:444–445. [PMC free article] [PubMed] [Google Scholar]
9. G. K. Patterson and G. B. Winburn, “Abdominal wall endometriomas: report of eight cases,” *American Surgeon*, vol. 65, no. 1, pp. 36–39, 1999. View at: Google Scholar
10. Chiang DT, Teh WT. Cutaneous endometriosis—surgical presentations of a gynaecological condition. *Aust Fam Physician*. 2006;35:887–888. [PubMed] [Google Scholar]
11. Gunes M, Kayikcioglu F, Ozturkoglu E, Haberal A. Incisional endometriosis after cesarean section, episiotomy and other gynecologic procedures. *J Obstet Gynaecol Res*. 2005;31:471–475. doi: 10.1111/j.1447-0756.2005.00322.x. [PubMed] [CrossRef] [Google Scholar]
12. Picod G, Boulanger L, Bounoua F, Leduc F, Duval G. Abdominal wall endometriosis after caesarean section: report of fifteen cases. *Gynecol Obstet Fertil*. 2006;34:8–13. doi: 10.1016/j.gyobfe.2005.11.002. [PubMed] [CrossRef] [Google Scholar]
13. Ding Y, Zhu J. A retrospective review of abdominal wall endometriosis in Shanghai, China. *Int J Gynaecol Obstet*. 2013;121(1):41–4.
14. McLaren J. Vascular endothelial growth factor and endometriotic angiogenesis. *Hum Reprod Update*. 2000;6(1):45–55.
15. Minaglia S, Mishell DR, Jr, Ballard CA. Incisional endometriomas after cesarean section: a case series. *J Reprod Med*. 2007;52:630–634. [PubMed] [Google Scholar]
16. Wasfie T, Gomez E, Seon S. Abdominal wall endometrioma after cesarean section: a preventable complication. *Int Surg*. 2002;87:175–177. [PubMed] [Google Scholar]