

## Post caesarean section anterior abdominal wall endometriosis : case report and review of literature

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### Abstract

Abdominal wall endometriosis is a likely sequelae of caesarean section as viable endometrial tissue are deposited in the peritoneal cavity or anterior abdominal wall. One such case to sensitize clinicians of this rare presentation of the disease is presented. The patient was a 48 year old woman who presented with a lesion and cyclical bleeding from a midline caesarean section scar for nine months. The lesion was excised and diagnosis was confirmed on histology.

**Key words:** Endometriosis, Anterior abdominal wall, Caesarean section

### Introduction

Endometriosis is defined as a functioning endometrial tissue outside the uterine cavity. It presents in approximately 10-15% of women in the reproductive age, and is commonly found in the pelvis (1,2). Extrapelvic endometriosis is rare. The most common extrapelvic form of endometriosis is cutaneous endometriosis, involving scar tissues occurring after obstetric or gynaecologic procedures such as episiotomy, hysterectomy, caesarean section, amniocentesis, and laparoscopic surgery (1,3, 4).

### Case presentation

A 48-year old woman presented with a history of cyclical bleeding from a midline caesarean section scar for nine months. This coincided with her regular menses. She also noted a small itchy swelling in the region that was gradually increased in size over the same period. She had had three previous caesarean deliveries with the last one being four years prior to the index presentation. On examination, she had a 2cm x 2cm swelling in the lower third of the scar as illustrated in Figure 1. An ultrasound scan done showed a normal uterus and pelvis. However, it could not clearly delineate the mass from the normal adipose tissue in the anterior abdominal wall.

**Figure 1:** Swelling in the lower third of the midline scar



Endometriosis was presumed as a possible diagnosis and the lesion was excised undertaken under general anaesthesia (Figure 2).

**Figure 2:** Excision of the mass

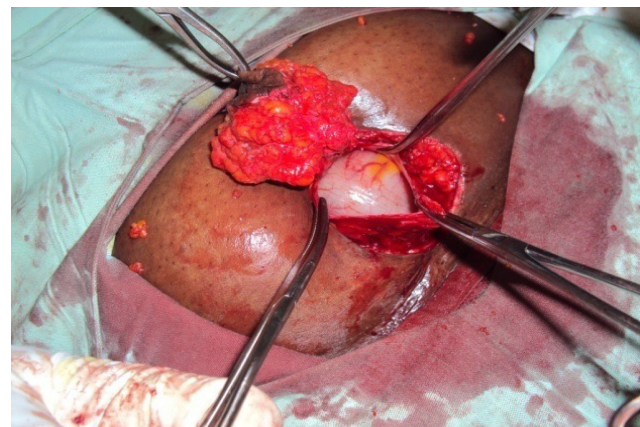


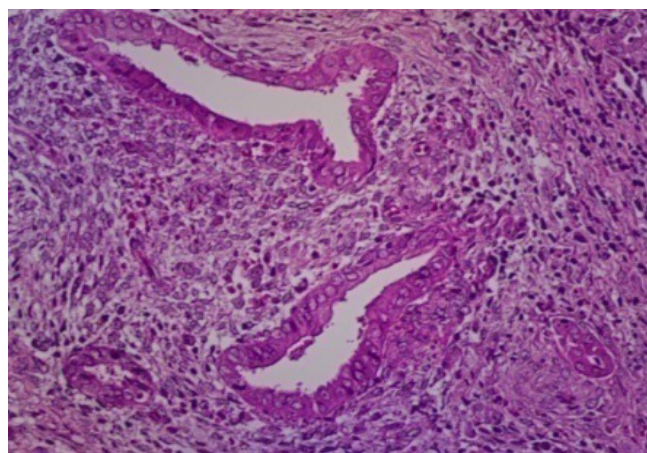
Figure 3 shows the mass after excision (after being immersed in formalin) illustrating cystic areas within the tumour

**Figure 3:** The mass after excision



The patient had an uneventful recovery and was discharged on the 1<sup>st</sup> post-operative day. She remained asymptomatic three months later and was discharged from follow-up.

**Figure 4:** Endometrial glands showing secretory activity, and associated stroma. There are hemosiderin-laden macrophages, associated inflammatory cells and endometrial islands



Histological examination showed deep intra-dermal lesion comprising endometrial-type glands associated with surrounding endometrial stroma. Scattered haemosiderin-laden macrophages were also noted (Figure 4). Based on these findings a diagnosis of anterior abdominal wall endometriosis was made.

## Discussion

Endometriosis is a disorder in which endometrial tissue abnormally grows in sites other than the endometrial cavity (2-4). The true incidence is not known but it is estimated to occur in approximately 10 to 15% in the reproductive age group. The most common site is the pelvis though atypical presentation in other extrapelvic

sites such as the skin, episiotomy and other surgical scars have been reported (2,3,5). Post-caesarean section endometriosis is rare, with an estimated incidence of 0.03-0.47% (1,3). It's found almost exclusively in women of reproductive age (as was the case in our patient) and is rare in postmenopausal women (2).

Though the cause of endometriosis is unknown, various theories have been proposed for endometriosis including; retrograde spread of collections of endometrial cells during menstruation, blood/lymphatic or iatrogenic spread, metaplasia of the pelvic peritoneal cells, immune system dysfunction/autoantibody formation and the genetic theory (2-8).

Scar endometriosis is thought to be the result of direct inoculation of the abdominal fascia or subcutaneous tissue with endometrial cells during surgical intervention and subsequent stimulation by estrogen. The time interval between operation and presentation has been shown to vary from three months to seven years (1,3). In a study of 25 patients with histological diagnosis of endometriosis, 80% of the patients had prior abdominal surgery and the remaining 20% had endometriosis of umbilicus (9). Our patient had had three caesarean sections with the last being 4 years prior to presentation. The presentation was therefore within the time frame mentioned above. Deposit of endometrium on the anterior abdominal wall (during caesarean section) was the most likely cause the disease.

The characteristic clinical symptom of abdominal wall endometriosis is cyclic pain associated with menstruation. Most patients also present with a palpable mass at the site of maximum tenderness in the region of the surgical scar (1,3,6). The endometrial glands remain functional and menstruation occurs every cycle. With accumulation of menstrual like material, they become cystic, dark brown/ black (2,4,5). Our patient had history of bleeding through a site on a subumbilical midline incision scar which was in line with the presentation reported elsewhere (6).

On sonography, these lesions appear hypoechoic, vascular, or solid, with some cystic changes. CT scan usually shows a solid, well circumscribed mass. The radiological findings are non-specific and a wide spectrum of disorders presenting as a mass should be considered in the imaging differential diagnosis. These include neoplasms such as sarcoma, desmoid tumour, lymphoma, or metastasis, as well as non-neoplastic causes such as a suture granulomas, ventral hernia, haematoma, or abscess (1,3,5,10). In our case, the ultrasound could not distinguish the mass from the normal adipose tissue.

Therapeutic options for abdominal wall endometriosis are pharmacologic therapy with hormonal agents such as progestogens, oral contraceptive pills, and GnRH agonists or simple surgical excision. The success rate of medical therapy has been reported to be



low, offering only temporary alleviation of symptoms often followed by recurrence after cessation of the drug. Moreover, due to side effects such as amenorrhoea, weight gain, hirsutism, and acne, compliance is unlikely. Wide surgical excision, therefore, is the treatment of choice (6,7,10).

With advanced endometriosis, cyst formation and fibrosis occurs. Blood is found in these “chocolate cysts” (Figure 3). The lesions are composed of tissue histologically resembling endometrial glands and stroma and hemosiderin-laden macrophages (2, 5). Endometriosis can be prevented by carefully avoiding depositing portions of the endometrium in the peritoneal cavity or the anterior abdominal wall (2, 4, 11, 12).

## Conclusion

Endometriosis should be considered as a possible diagnosis in women presenting with atypical lesions on the caesarean section scar. This could occur even up to 7 years after the index operation. However, there is need for histological confirmation to exclude other potential causes including malignancy. Wide excision should be considered the treatment of choice as opposed to medical management as it offers better relief with minimal side effects. We also recommend caution during caesarean section with meticulous cleansing of the wound to prevent inoculation of endometrial tissue at the operation site.

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## References

1. Erhan, K., Kadir, G., Güneş, G. *et al.* Abdominal wall incision scar endometriosis. *Göztepe Tıp Dergisi*. 2011; **26**(3):140-142.
2. Iria, N., Michela, T., Emi, D. *et al.* Diagnosis and treatment of post-caesarean scar endometriosis *PubMed*. 2007; **10**: 2340/00015555-0269, Pages 428-429.
3. Mani, A. and Deshmukh, S.D. Massive abdominal wall endometriosis masquerading as desmoid tumour. *J Cutaneous Aesthetic Surg*. 2011; **4**(2): 141–143.
4. Budhoo, E. and Maharaj, D. A case of endometriosis in the abdominal wall post caesarean section. *Surg Sci*. 2013; **4**: 125.
5. Wanyonyi, S.Z., Gichere, I.H. and Chege, J. Primary umbilical endometriosis: A case report. *JOGECA*. 2012; **24**: 25.
6. Gourgiotis, S., Veloudis, G., Pallas, N. *et al.* Abdominal wall endometriosis: Report of two cases. *Romanian J Morphol Embryol*. 2008; **49**(4):553–555.
7. Eluk, M., Loulu, E., Mehmet, A., *et al.* Abdominal wall endometrioma: localizing in rectus abdominus sheath. *Turk J Med Sci*. 2004; **34**: 341-343.
8. Rita Gidwaney and Badler RL. Endometriosis of abdominal and pelvic wall scars: multimodality imaging findings, pathologic correlation, and radiologic mimics. *RadioGraphics*. 2012; **32**: 2031-2043.
9. McKenna, P. and Wade-Evans, T. Anterior abdominal wall endometriosis. *J Obstet Gynecol*. 1985; **6**: 114-116. Informahealthcare.com
10. Tamiolakis, D., Antoniou, C., Mygdakos, N., *et al.* Endometriosis involving the rectus abdominis muscle and subcutaneous tissues: fine needle aspiration appearances. *Chirurgia* (Romanian Society of Surgery Magazine). 2003; **103** (5): 587-590.
11. Andolf, E., Thorsell, M. and Källén, K. Caesarean section and risk for endometriosis: A prospective cohort study of Swedish registries. *BJOG* (An International Journal of Obstetrics and Gynaecology). 2013; **120**(9): 1061-1065.
12. Pikoulis, E., Karavokiros, J., Veltsista, K. *et al.* Abdominal scar endometriosis after caesarean section: report of five cases. *West Indian Med J*. 2011; **60** (3): 351 - 353.
13. Khalifa, A.J. Endometriosis at caesarian section scar. *Oman Med J*. 2009; **24**: 294-295.