

Abdominal scar endometriosis

Rollings S. Jamabo · Rosemary N. Ogu

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Abstract

Background Abdominal scar endometriosis is an uncommon pathology. It can occur in any abdominal scar, most often after a surgical procedure on the uterus.

Aim The purpose of this study is to highlight the potential pitfall in the diagnosis of this disease.

Patients and methods This retrospective study reviewed all cases of proven abdominal scar endometriosis seen in a 5-year period (2002–2006) in our hospital, noting the demographic data of the patients and management. They were all treated by the same surgeon and also had histopathological confirmation of the lesion.

Results A total of 14 women were treated during this period. They were all pre-menopausal. The mean age was 29.1 years (range 20 to 42). Presenting symptoms included painful ‘heaped-up’ scars and cyclical pain related to their

menstrual periods. They were referred to the general surgical clinic with various diagnoses such as incisional hernia, granuloma, keloid scar etc. All the patients had history of previous surgical procedures on the uterus for various indications. Treatment was a wide excision of the lesion with apposition of the edges only. Specimens were examined histologically and confirmed to be endometriosis. The follow up periods were rather short as the patients stopped to attend the hospital. During this period, there was no recurrence or wound break-down.

Conclusion Although scar endometriosis is a rare entity, a good and diligent surgical history and a high index of suspicion are the keys for a pre-operative diagnosis.

Keywords Endometriosis · Abdominal scar · Management · Outcome

Introduction

Endometriosis is defined as the presence of endometrial glands and stroma outside the normal lining of the uterine cavity. It occurs more commonly in the abdominal cavity in 0.03 to 1% of women with previous surgery on the uterus [1, 2].

Endometriosis of the skin and soft tissues makes up 3.5% of cases of extra pelvic endometriosis, with majority of such cases occurring in surgical scars following operations on the uterus [3]. The diagnosis is often a pitfall as patients are usually referred with such diagnoses as granuloma, incisional hernia, keloid. This is a 5-year retrospective review of cases encountered by one surgeon at the University of Port Harcourt Teaching Hospital, Port Harcourt.

R.S. Jamabo · R.N. Ogu
Departments of Surgery and Obstetrics and Gynaecology
University of Port Harcourt Teaching Hospital,
Port Harcourt.

R. S. Jamabo (✉)
e-mail: drjamabo@seasidesurgery.com

Patients and methods

Cases of histologically proven abdominal scar endometriosis seen from January 2002–December 2006 (a 5-year period) referred to a general surgical unit at the University of Port Harcourt Teaching Hospital were reviewed. The case notes were reviewed for patients' indications for referral, age, parity, menstrual history, initial clinical impression, duration of symptoms, interval between the surgery on the uterus and clinical symptoms since surgery, operative findings and confirmed histopathology reports. The patients were followed up for periods ranging from 6 months to a year.

Results

There were 14 pre-menopausal women who were treated during this period of study (Table 1). They all presented with painful lump (s) in the abdominal scar. Typical cyclical pain was present in 6 (42.85%) cases. The mean age was 29.1 years (range 20 to 42). The uterine procedures preceding endometriosis were as follows: 8 (57.14%) had previous Caesarean section, 5 (35.71%) had exploratory laparotomy

for perforated uterus secondary to criminal abortion and 1 (7.14%) had a myomectomy .

The referral diagnoses included incisional hernia 4 (28.57%), infective granuloma 6 (42.85%), keloid /hypertrophic scar 3 (21.42%) and rectus sheath haematoma 1(7.14%).

Investigations done included full blood count, urea and electrolytes, chest and abdominal radiographs. Imaging studies such as ultra sound scan, CT scan and MRI were not done.

Treatment was by complete and wide excision of the scars and the rectus sheath was apposed by mass layer closure with No I Nylon.

Histopathological examination of the specimens confirmed endometriosis in all cases.

All the patients were followed up to varying period of months (6 months to 1 year) before they were lost to follow up. During the follow up period, there were no untoward sequelae such as recurrence or wound failure.

Discussion

Abdominal scar endometriosis is a gynaecological pathology that often presents to the general surgeon rather than

Table 1 Clinical Features of 14 Patients with Abdominal Scar Endometriosis

S/NO	Age	Previous Surgery	Presenting Symptoms	Clinical Diagnosis
1.	29	Caesarean Section	Painful lump	Incisional hernia
2.	22	Lap. For Peritonitis 2° to perf. uterus	Painful lump	Incisional hernia
3.	31	Caesarean Section	Painful lump Cyclical Pain	Granuloma
4.	37	Caesarean Section	Painful lump Cyclical Pain	Granuloma
5.	35	Caesarean Section	Painful lump Cyclical Pain	Granuloma
6.	26	Lap. For Peritonitis	Painful lump	Haematoma
7.	42	Myomectomy	Painful lump	Keloid
8.	30	Lap. For Peritonitis	Painful lump Cyclical Pain	Incisional hernia
9.	20	Lap. For Peritonitis 2° to Perf. Uterus	Painful lump Cyclical Pain	Granuloma
10.	31	Caesarean Section	Painful lump	Incisional hernia
11.	24	Caesarean Section	Painful lump	Keloid
12.	37	Caesarean Section	Painful lump Cyclical Pain	Keloid
13.	24	Caesarean Section	Painful lump	Granuloma
14.	20	Lap. For Peritonitis 2° to Perf. Uterus	Painful lump	Granuloma

Key: Lap. = Laparotomy 2° = Secondary Perf. = Perforated

the gynaecologist. Since it is a rare entity, it is difficult to diagnose. However, it should be suspected in any woman of child bearing age complaining of a cyclical painful nodule in a scar following a previous obstetric or gynaecological procedure [4].

This phenomenon results when there is a direct implantation of viable endometrial cells in the subcutaneous or sub-fascial planes exposed by the surgical incisions on the abdominal wall [5]. Although spillage of endometrial cells into surgical incisions probably occurs quite frequently during gynaecological or obstetrical surgery, endometriosis occurs with much lower frequency. This implies that additional factors, including environmental and genetic factors (cellular and humoral immune system abnormalities, as well as estrogen abnormalities) may confer susceptibility to the development of endometriosis in some people [5, 6, 7]. These cellular and humoral factors are due to the ability of the endometrial cells to regulate the cytotoxic immune activity and their capability to resist immune-mediated apoptosis [8]. These phenomena enable the survival of ectopic endometrial cells [8].

The classical manifestation of endometriosis is a focal cyclical pain. This was found in six (42.85%) of our patients. It is not a commonly found symptom in scar endometriosis. Scar endometriosis rather commonly presents as a painful, slow growing mass. This mass results from cycles of bleeding and local inflammatory response. In view of the clinical similarities between the painful, slow growing mass and other surgical pathologies such as infective granuloma, these patients are often referred to the general surgeons for evaluation and treatment [3].

Scar endometriosis is a disease which occurs among pre-menopausal women. In our study, 14 pre-menopausal women with a mean age of 29.1 years (range 20–42) were treated. They all had uterine procedures prior to their presentation to the hospital and were referred to the surgical clinic as incisional hernia, infective granuloma, keloid and rectus haematoma.

Pre-operative diagnosis of scar endometriosis is feasible with fine-needle aspiration cytology (FNAC) as it provides accurate diagnosis [3]. Imaging studies such as ultra sound scan (USS) including power Doppler examination, CT scan or MRI are equally useful and may be helpful in identifying the exact anatomical location of the lesion and in excluding other surgical conditions [11]. Sonography shows the lesions as hypoechoic, vascular and solid with some cystic changes, while CT scan shows these lesions as spiculations [11]. None of our patients was investigated with these, as they were not considered to be essential investigations for the working diagnosis and it was necessary to save costs. Lack of these investigations did not appear to affect the outcome of the management of these patients.

Exploration with wide excision remains the treatment of choice for abdominal scar endometriosis when it is suspected. Sometimes the resulting wide defect following the excision would need an autologous pedicle skin – muscle graft (composite graft) or a synthetic mesh graft such as polytetrafluoroethylene mesh, polypropylene mesh. The surgical excision has to be sufficiently wide to avoid a recurrence especially if a malignancy is present.

Scar endometriosis, as well as endometriosis at other sites, can undergo malignant change [9]. This malignant transformation occurs rarely. Clear cell carcinoma is the most common histological subtype, followed by endometrioid carcinoma [10]. The outcome, after a short follow-up, is rapidly fatal with a survival rate of only 57% [9, 10].

This complication was not seen in this series perhaps, due to the short period of follow-up.

Conclusion

From this study, we recommend that good technique and proper caution should be exercised during gynaecological or obstetrical procedures to avoid endometrial transplantation to the anterior abdominal wall.

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