Spontaneous abdominal wall endometrioma: A case report

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ABSTRACT

INTRODUCTION: The abdominal wall is the commonest site of extra pelvic endometriosis (endometrioma), defined as the presence of functional endometrial gland and stroma outside the uterine cavity [1]. Endometriosis is a common gynaecological entity, with incidence of 8–18% of all menstruating women. In most cases it is located within the pelvis. Endometriosis is found in up to 24% of all gynaecological laparotomies [2] and presents clinically with dysmenorrhea, dyspareunia, infertility and occasionally symptoms and signs of acute and chronic abdomen. The endometrial implants may be categorised as cystic, mixed or solid, with the cystic implants being most common. Although, in some cases endometrial implants may occur spontaneously. Endometriosis can be intra or extra pelvic in location. Most cases are intra pelvic, usually involving ovary, pouch of Douglas, pelvic peritoneum, urogenital sinus, urinary bladder, rectum, broad and round ligament. Extra pelvic implantation of endometrium has been reported in every organ of body, includes skin, spleen, liver, lung, pleura, brain, extremities, anterior abdominal wall and umbilicus. Abdominal wall is a common site of extra pelvic endometriosis, usually develops in an abdominal surgical scar. This ectopic presence of endometrial tissue occurs in the abdominal wall in 0.03–1.08% of women with history of obstetric or gynaecological procedures. Spontaneous abdominal wall endometriosis (AWE) occurs in a scar less abdomen accounting for

1. Introduction

Abdominal wall endometriosis (AWE) represents a non-neoplastic, ectopic or heterotopic growth of endometrial gland and stroma outside the uterine cavity [1]. Endometriosis is a common gynaecological entity, with incidence of 8–18% of all menstruating women. In most cases it is located within the pelvis. Endometriosis is found in up to 24% of all gynaecological laparotomies [2] and presents clinically with dysmenorrhea, dyspareunia, infertility and occasionally symptoms and signs of acute and chronic abdomen. The endometrial implants may be categorised as cystic, mixed or solid, with the cystic implants being most common. Although, in some cases endometrial implants may occur spontaneously. Endometriosis can be intra or extra pelvic in location. Most cases are intra pelvic, usually involving ovary, pouch of Douglas, pelvic peritoneum, urogenital sinus, urinary bladder, rectum, broad and round ligament. Extra pelvic implantation of endometrium has been reported in every organ of body, includes skin, spleen, liver, lung, pleura, brain, extremities, anterior abdominal wall and umbilicus. Abdominal wall is a common site of extra pelvic endometriosis, usually develops in an abdominal surgical scar. This ectopic presence of endometrial tissue occurs in the abdominal wall in 0.03–1.08% of women with history of obstetric or gynaecological procedures. Spontaneous abdominal wall endometriosis (AWE) occurs in a scar less abdomen accounting for

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20% of all AWE. The diagnosis can be very challenging in patients with nonspecific symptoms. Endometriosis is rarely seen by general surgeons and is often diagnosed on histological examination postoperatively [3]. Such cases are poorly reported in the literatures. The aim of this case report is to remind that some very rare site may be involved in endometriosis. The case report is in line with SCARE 2018 criteria [23].

2. Historical background

Daneil Schreno, a German physician, first reported endometriosis in 1690. During the mid-part of the 19th century, Rokitansky had a great intuition: endometrial glands and stroma can be present in ovarian and uterine neoplasias. However, using histological parameters of endometrial structure and activity, the first scientist to delineate peritoneal endometriosis under the name ‘adenomyoma’ was Cullen. On the other hand, Rokitansky was the first to describe a form of adenomyosis (adenomatous polyp). Early description of ovarian endometrioma as ‘haematomas of ovary’ or ‘chocolate cysts’ date back to the end of the 19th century. The first mention of an ‘ovary containing uterine mucosa’ was published in 1899 by Russel, but Sampson was the first to demonstrate specific endometrial activities, such as desquamation at the time of menstruation and decidualization in pregnancy, subsequently, he presented a theory on its pathogenesis.

3. Case history

A 42 year-old Hindu women of Indian nationality without any previous operative history, presented to surgery outpatient clinic with 5-month history of focal non-cyclic pain and a palpable nodular mass, located in hypogastric area below the umbilicus in the midline. She stated that she had continuous dull ache pain in swelling, not related to onset of her menstrual period. Pain was a remarkable complaint in our patient. She has also been suffering from diabetes mellitus, hypertension and hypothyroidism, and on regular medications for her comorbidities. At physical examination, a nodular tender mass of 3 × 2 cm was identified and fixed to rectus sheath. A clinical diagnosis of a desmoid tumour was made preliminarily. Biochemical and complete blood counts were within normal limits. X-Rays abdomen showed no features of intestinal obstruction. The exploration (under general anaesthesia) with transverse incision over the swelling was performed, a firm nodular mass was spotted and excised (Fig. 1). Patient was given injection Ceftriaxone 1gm IV at the time of induction of anaesthesia and one dose postoperatively and IV Paracetamol 1gm-BD for one day. The operating surgeon was the main author (Postgraduate Specialist, Master of Surgery) and patient was managed postoperatively in DSP Hospital, Durgapur.

The cut surface of specimen consists of dense tan-white rubbery tissue with focal haemorrhage and multiple cystic spaces (Fig. 2). The histopathology revealed endometrioma (Figs. 3–5). The patient was discharged on 5th Postoperative day uneventfully on account of her comorbid conditions. (Uncontrolled Diabetes Mellitus & Hypertension) and stitches were removed on 9th postoperative day. One year of follow up after the excision, patient is free of disease and no recurrence has been observed. The patient was followed up at 3-month interval by serial Ultrasonography (abdomen and pelvis) at DSP Hospital.

4. Discussion

Endometriosis is usually located in the pelvic organs and is a relatively common gynaecological problem in women of reproductive age. It can be found at any organs of our body like
bowel, urinary bladder, lungs, pleura, ureter, brain, and ante-
rior abdominal wall [4,5]. Abdominal wall endometriosis is most
commonly associated with surgical scars, especially caesareaen
section, laparoscopic surgery and any pelvic surgery [3]. The inci-
dence of abdominal wall endometriosis after caesareaen section is
0.03–1.7% of all cases [7]. Spontaneous abdominal wall endometrio-
sis (AWE) is defined as presence of ectopic endometrial glands
superficial to the peritoneum in a scar less abdomen [22]. Spon-
taneous abdominal wall endometriosis (SAWE)) is a rare clinical
entity, accounting for 20% of all abdominal wall endometriosis.
[5]. Umbilicus is the most common site for developing sponta-
eneous abdominal wall endometriosis, followed byinguinal area and
anterior abdominal wall [3,5,10]. Steck and Helwig [6] reported
82 patients with ectopic endometriosis, of which 77 endometri-
omas appeared in pre-existing scars at the umbilicus. Only five
were considered to be spontaneous. Several alleged pathophys-
iological theories concerning the origin of endometriosis have
been postulated, including direct extension, coelomic metaplasia,
implantation or reflex, induction theory, lymphatic and vascu-
lar metastasis. The Dissemination theory developed by “Halban,”
proposes that migration of endometrial cells through ‘lymph vas-
cular route to different location outside the pelvis [11,12]. The
precise pathogenesis of spontaneous abdominal wall endometrio-
sis(SAWE) remains an enigma. In our case spontaneous primary
endometrioma was due to vascular or lymphatic metastasis. Two
leading theories exist for its pathogenesis. One theory claims that
the mesenchymal cells with retained multipotential may under
favourable circumstances undergo metaplasia into an endometri-
oma. The other hypothesis states that endometrial cells may be
transported to ectopic sites forming an endometrioma. The extra
pelvic endometriosis has been described in nearly all body cav-
ities and organs. But its most frequent locations are umbilicus,
inguinal areas and anterior abdominal wall. [3,5,10]. In general,
the characteristic clinical symptoms of endometriosis are cyclic
pain associated with menstruation. Our patient with abdominal
wall endometriosis presented with abdominal pain, not associated
with menstrual cycle. The noncyclic nature of pain in endometrio-
sis of abdominal wall has occasionally been reported by other
authors. However, it has generally been regarded as atypical pre-
sentation, explaining why it is clinically misdiagnosed, as was
the case in our patient [8,9,14]. The main symptom is only a
palpable mass lesion at the site of maximum tenderness. This pal-
pable mass varies in size following menstrual cycle. Concomitant
pelvic endometriosis is the cause of endometriosis in a scar, was
reported in 26% of cases [15]. In our case there was no associ-
ated pelvic endometriosis. Imaging techniques (Ultrasoundography,
Computerised Tomography, Magnetic resonance imaging), charac-
teristics of abdominal wall endometriosis are nonspecific, showing
a solid enhancing mass in the abdominal wall [9,16–18]. The major
role of CT Scan and MRI may be only to depict the extent of disease
preoperatively, henceforth a biopsy is essential to reach a defini-
tive diagnosis. FNAC is not diagnostic but have some aid to diagnose
scar endometriosis [19]. Two histological features out of three diag-
nostic triads are required to diagnose endometriosis: endometrial
glands, endometrial stroma or hemosiderin pigments (Figs. 3–5).
Differential diagnosis of anterior abdominal wall endometriosis
especially when symptoms are noncyclic are: abscess, lipoma,
suture granuloma, desmoid tumour, sarcoma, lymphoma, inci-
sional hernia or primary and metastatic cancer [7]. The preferential
treatment of endometrioma is surgery and diagnosis is confirmed
by histopathology. Most of literatures agree that surgical manage-
ment with wide excision is a key to avoid recurrence and exclude
malignancy. Hormonal therapy like oral progesterone, Danazol,
gonadotropin-releasing hormone analogue can be added to surgical
therapy with proven pelvic endometriosis [20]. Poor results have
been observed with Danazol [13], Leuprolide [21] and progesterone
[15]. Surgical treatment is preferable and medical management
cannot be recommended except in the premenopausal patients.
Local recurrence after adequate excision is rare. We suggest that
abdominal wall wound should be cleaned thoroughly and irri-
gated vigorously with normal saline to prevent abdominal wall
diagnosis. Diagnostic failure was challenges encountered dur-
ing case study due to atypical clinical presentation and nonspecific
results of imaging techniques, which was overcome by high index
of clinical suspicion and histopathology.

5. Conclusion

Spontaneous abdominal wall endometriosis is extremely rare,
accounts for only 20% of all abdominal wall endometrioma. The
characteristic clinical Triad: mass, pain and cyclic symptoms help in
diagnosis, but it is not present in all cases. Spontaneous abdominal
wall endometriosis is diagnosed by histopathological examination
and the treatment of choice is wide excision. The success rate of
medical therapy has been reported to be low, offering only tem-
porary alleviation of symptoms, often followed by recurrence after
cessation of the drug. This clinical entity must be included in the dif-
ferential diagnosis of any abdominal mass in fertile female patients
with or without surgical history. The diagnostic and therapeutic
delay must be avoided in such an uncommon pathological condi-
tion, as endometriosis is a progressive disease, delay in diagnosis
and treatment would increase risk of severe pain, obliteration of pelvic anatomy and infertility. Recurrence of abdominal wall endometriosis is high, especially when first surgery is not appropriate and leave compromised surgical margins.

Declaration of Competing Interest

The authors report no declarations of interest.

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Ethical approval

As it is a case report, ethical approval is exempted by our institution.

Consent

Written informed consent was obtained from patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Author’s contribution

RAJ RANJAN KUMAR is the chief author of this case report. No other author contributed.

Registration of research studies

Not applicable.

Guarantor

Dr Runu Mukherjee, Joint Director, Durgapur Steel Plant Hospital is the Guarantor for this case report.

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