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Intramuscular Abdominal Wall Endometriosis away from Caesarean Scar; A Diagnostic Dilemma for Surgeons

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case study

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ABSTRACT

Abdominal wall endometriosis is a very rare disease that usually develops in previous scar from caesarean section normally confined in subcutaneous fatty tissue. Intramuscular abdominal wall endometriosis involves rectus sheath or muscle. In this case abdominal wall endometriosis was intramuscular or musculoperitoneal and "away from previous scar" which created a diagnostic dilemma for surgeon both clinically and radiologically. Fine Needle Aspiration Cytology was not much useful in this case. Due to this diagnostic dilemma, surgeon performed wide surgical excision in this case.

Keywords: Abdominal Wall; endometriosis; caesarean scar; cytology; dilemma.

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1. INTRODUCTION

Endometriosis is defined as the presence of endometrial tissue outside the uterine cavity. The incidence rate is reported at 0.4% to 0.1% but incidence is increasing in recent data up to 1-2% [1]. Endometriosis may develop in any organ in extra pelvic sites and most commonly located in the ovaries, bowel, or the tissue lining in the pelvic. Abdominal wall is an uncommon site of the extra pelvic location, where it mostly occurs in an old surgical scar [2]. Abdominal wall endometriosis (AWE) develops due to implantation of endometrial cells into the soft tissues of the abdominal wall after open uterine surgeries [3]. The disease is characterized with the triad of painful tender mass in the abdominal wall, periodic pain associated with menses, and previous history of caesarean section in females of reproductive age group [3,4]. Preoperative diagnosis usually does not confirm. Its treatment is wide surgical excision which is widely accepted. Other treatment modalities are also describes as hormonal therapy and injecting ultrasound-guided alcohol into abdominal wall endometriosis [5].

2. CASE STUDY

A 32 year old female who underwent two previous caesarean sections and second caesarian 4 years ago, attended gynecology OPD in vyas hospital with complain of swelling in left side of abdomen below umbilicus since last 5 months which was progressive in nature and continue heavy bleeding per vaginum from last one month. After gynecological evaluation, per vaginal examination was normal and medical treatment was given for bleeding symptoms and patient was advised for an abdominal ultrasonography for swelling. In next visit, patient's bleeding symptoms were resolved medically and ultrasonography of abdomen was suggestive of lipoma. For that patient was referred to our surgical side to rule out the cause and nature of swelling. On abdominal examination clinically, swelling was about size of 4 c.m.x3 c.m., oval shape, firm to hard in consistency, fixed, margin clear and on straight leg raising, swelling was not protruded which clearly marked that swelling was intramuscular or musculoperitoneal. So, the diagnostic dilemma was still present and advised for fine needle aspiration cytology which was inconclusive. Then patient was again advised to repeat ultrasonography for swelling and new ultrasonography showed heterogeneously, hypoechoic lesion in the hypogastrium region in anterior abdominal wall, measuring 3.3x3.7x1.5 cm. Margins were slightly irregular and lie within intramuscular plane of the rectus muscle, suggestive of desmoids tumor. Due to diagnostic dilemma now the patient was planned for wide surgical excision of tumor under spinal anesthesia. Intraoperatively tumor was intramuscular involving rectus sheath and muscle. Wide surgical excision of tumor and three layer closure was done to prevent hernia and surgical site complications. Resected specimen Fig. 1 and 2 was send for histopathological examination. Postoperative wound (Fig. 3) was healthy. Patient was discharged on next day and all sutures were removed following after 10 days with no surgical complications. Postoperative histopathological examination was suggestive of endometriosis of anterior abdominal wall.

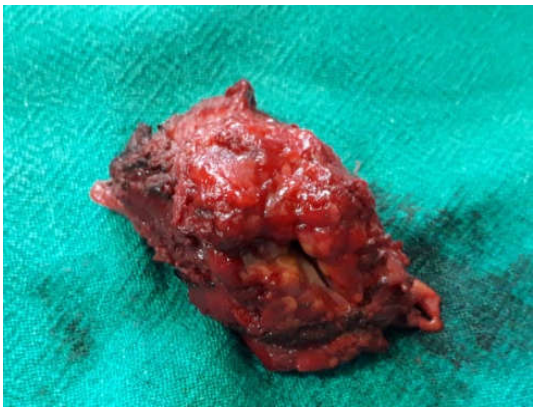


Fig. 1. Gross specimen (8x4x2 cm) with rectus sheath and muscle



Fig. 2. Cut surface with marked nodularity and white grey lesion

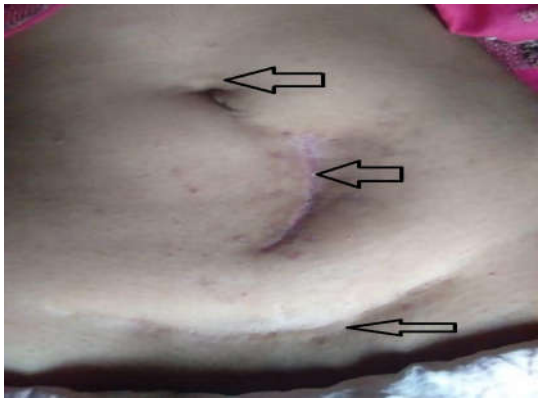


Fig. 3. Middle arrow indicate postoperative appearance of scar from where tumor was resected and upper arrow marked as umbilicus while lower arrow marked as previous caesarean scar

3. DISCUSSION

The abdominal wall endometriosis (awe) is an uncommon site of extrapelvic endometriosis, and usually develops within the skin or subcutaneous tissues in previous uterine surgery. But endometriosis involving the rectus abdominis muscle is very rare. In any abdominal swelling with history of previous uterine surgery differential diagnosis must includes abdominal wall endometriosis other than hernias, lipomas, hematomas, abscesses, and benign as well as malignant tumors [6]. Disease is mainly characterized by triad of symptoms including palpable mass may be pain full, pain usually associated with menses and history of previous uterine surgery. Among them most common clinical finding in abdominal wall endometriosis was palpable mass, primarily located in caesarean scar but may be away from scar as in this case. The exact etiology is still unknown but it is thought to be an iatrogenic transfer of endometrial cells during uterine surgery. Ultrasonography is the initial diagnostic modality for abdominal wall endometriosis but not for confirmatory [7]. Even in computed tomography scan and magnetic resonance imaging for the diagnosis of endometriosis, there are no pathognomic image findings because radiological appearance varies with stage of the menstrual cycle. So due to these non-specific findings, a wide spectrum of radiological differential diagnosis must be included as desmoids tumor, lipomas, hematomas, abscesses, and benign and malignant tumors should be considered. In our case, ultrasound showed an irregularly marginated intramuscular lesion with a heterogeneous echogenicity. The lesion could not be distinguished from the previous scar but in our case lesion was clearly separated from previous scar. Fine needle aspiration cytology is useful but mostly inconclusive. The size of the lesion and involvement of the rectus abdominis muscle or peritoneum, have shown to be risk factors for recurrence therefore, to avoid recurrence wide surgical excision is the widely accepted as the treatment of choice for awe. Sometimes polypropylene mesh or abdominoplasty may require due to wide surgical excision to prevent hernia development [8]. Hormonal therapy is being used only to relieve symptoms but recurrence is common after cessation of treatment. Literature also revealed that sclerotherapy by ultrasound-guided ethanol is also being used to treat intramuscular abdominal wall endometriosis. Even some people are using sclerotherapy as a first line of treatment. Incidence of abdominal wall endometriosis is increasing in association with increased numbers of uterine surgery. To prevent the disease, usual recommendation must be followed like swabs used to clean the endometrial cavity must not be used to clean the scar site, removing these swabs immediately from the operation area, avoid the suturing of uterus and scar with same suture, and before closing the scar wash the wound with normal saline.

4. CONCLUSION

Any swelling in abdomen with previous history of uterine surgery always considers abdominal wall endometriosis as a differential diagnosis other than lipoma, hernia, any tumor benign or malignant. Swelling must be examined clinically very carefully to know about the location either intramuscular or extramuscular, then radiologically to know the nature and origin of swelling. If there is still diagnostic dilemma then fnac must be done in all case of swelling before surgical excision. If, fnac is also inconclusive then always go for wide surgical excision to prevent recurrence of any lesion.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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