

Recurrent Scar Endometriosis in A Young Lady of 23 Years

Siddiquee FS¹, Sen S², Rahman MM³

A young lady of 23 years was admitted in the Gynaecology & Obstetrics department of the Community Based Medical College Hospital, Bangladesh with sensation of irregular fixed mass in left side of lower anterior abdominal wall in and around her previous scar for 01 year and periodic pain in that mass for 8 months during menstruation. Some times she felt colicky pain in lower and umbilical region, not related with menstruation. This lady was married for 6 years and para – 01 (still birth) and delivery was done by lower uterine caesarean section 4½ years back, and developed such mass for a few months after lower uterine caesarean section. This mass was excised 3½ years back. On the basis of history, clinical findings, ultra sonographic finding and histopathological report, this case was diagnosed as scar endometriosis.

She was also getting post operatively synthetic androgen for 6 months (400 mg daily). She again developed that mass 01 year after operation. Now she is almost free from pelvic pain by using synthetic androgen (Denazol) and is advised for pregnancy with assisted by reproductive technology.

All current therapies offer relief but cannot assure cure of recurrent scar endometriosis. Even after definitive surgery, endometriosis may recur. Definitive surgical treatment followed by long term oestrogen therapy yields better results. However the future treatment options should greatly improved upon what is offered now.

Key Words: Endometriosis; scar; pelvis; pain

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For author affiliations, see end of text.

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Case report

A young lady of 23 years from Bhaluka, Mymensingh was admitted in the Gynaecology & Obstetrics department of Community Based Medical College Hospital Bangladesh (CBMCH'B) on October 13, 2008 with a feeling of irregular fixed mass in left side of lower anterior abdominal wall in and around her previous scar for 01 year and periodic pain in that mass for 8 months during menstruation. After cessation of menstruation the pain subsides. Pain was throbbing in nature and starts a few days prior to menstruation. Her menstrual cycles were regular. No history of dysmenorrhoea,

menorrhagia, dyspareunia, haemoptysis, blood in urine or stool or bleeding during intercourse and no such pain on deep palpation in pelvis. No history of weight loss or loss of appetite. Some times she feels colicky pain in lower and umbilical region, not related with menstruation. On deep palpation she just feels tender in pelvis. She had low back pain.

This lady was married for 6 years and para – 1 (still born by LUCS) 4½ years and developed such mass for a few months after Lower uterine section (LUCS). This mass was excised 3½ years back and histopathologically diagnosed as scar

endometriosis. By ultrasonographically found that mass was fixed with the skin, superficial fascia, muscle coat and parietal peritoneum. Uterus forms jumble in pouch of Douglas with other surrounding structures. There founds nodules on the surface of uterus, ovaries and pouch of Douglas of various sizes. Some were more than 5mm. Probably these are due to implantation of endometrial tissue to previous scar and peritoneal cavity. Urine routine examination shows a few pus cells. Plain x-ray of abdomen and other necessary investigations shows no relevant findings. She was also getting post operatively Danazol (synthetic androgen) drugs for 6 months 400mg daily.

She again developed that mass for 1 year back. Now she is almost free from pelvic pain by using synthetic androgen (Denazol) and is advised for pregnancy even assisted by reproductive technology.

Discussion

Endometrial tissue is found as deposits outside the uterine cavity. In female, endometriosis is one of the important causes of pelvic pain. It is a challenging condition for clinicians and patients alike. Most commonly occur in ovaries, the uterosacral ligaments and the cul-de-sac peritoneum. Other sites include the uterine tubes, the serosal surface of the uterus, the retrovaginal septum, the sigmoid colon, the pelvic peritoneum, the small intestine, breast, extremities, the pleural cavities and the lungs. Endometriosis found in incisional areas after gynaecological operations or caesarean section. Scar endometriosis is a rare condition. A surgical scar becoming painful and swollen during menstruation is the classic symptom of scar endometriosis.¹

Approximately 20% of all laparotomies in women in the reproductive age group endometriosis are found. It is estimated that endometriosis is present in 3 – 10% of women in the reproductive age group and 25 – 35% of infertile women. It is seen in 1 – 2% of women

undergoing sterilization or sterilization reversal, in 10% of hysterectomy surgeries, in 16 – 31% of laparoscopies, and in 53% of adolescents with pelvic pain severe enough to warrant surgical evaluation. Endometriosis is the most common single gynaecologic diagnosis responsible for hospitalization of females 15 – 44 years old, being found in over 6% of patients². Endometriosis persists into the post reproductive years. Observation of 32 women with abdominal incision endometriosis who under went surgical treatment in the obstetrics and gynaecological hospital at Fudan University revealed that they developed scar endometriosis and 31 patients had a history of caesarean section and one case underwent gynaecological operation. There was no recurrence of endometriosis in those cases.³ Exact cause of endometriosis is yet unknown in women. Endometriosis is a common and important health problem of women. The most common complaint is pain and it is often associated with menstrual period, begins before the flow starts and ending when the bleeding is complete⁴.

Although endometriosis may be suspected on the basis of the patient's history and clinical findings, the definitive diagnosis is made usually with the aid of a laparoscope. Biopsy may be helpful in atypical cases. Diagnosis is done by laparoscopy or at laparotomy. Treatment is given with hormonal manipulation. Medoxyprogesterone 10 mg 2 – 3 times daily frequently provides symptomatic relief. Synthetic androgen (Danazol) is often successful. Complicated endometriosis needs definitive surgery and to prevent recurrence, needs oestrogen combined with a progestin 2.5mg daily.

Endometriosis is a common benign gynaecological condition. The cause of endometriosis is unknown. The leading theories include retrograde menstruation with transport of endometrial cells, metaplasia of coelomic epithelium, haematogenous or lymphatic spread, and direct transplantation of endometrial cells.

A combination of these theories likely is responsible. It is extremely common in women who have congenital anomalies of the lower reproductive tract that would favour menstrual reflux. The most common of these anomalies is an imperforate hymen. A number of theories have been proposed – the “disease of theories”. Retrograde menstruation, although probably universal, it is most likely cause. Endometriosis is certainly oestrogen dependent and regresses after bilateral oophorectomy. Distant sites can be explaining coelomic metaplasia, but in all cases a genetic and immunological basis is emerging from immunohistochemical studies. There is now extensive evidence of altered immune function in endometriosis.⁵

Endometriosis may occur when the deficiency in cellular immunity allows menstrual tissue implant and grow on the peritoneum and other sites. Some also indicates increased concentration of leukocytes, macrophages in the ectopic endometrium and the peritoneal cavity, which secrete growth factors and cytokines into the peritoneal fluids, which lead to proliferates the endometriotic implants and the inflammatory implants. Investigations has reveals that a possible role for the HLA-B7 allele. Expression of HLA-B7 has been shown to inhibit the cytotoxic activity of natural killer like T-lymphocytes, suggesting that growth of ectopic endometrial cells might be under genetic control.⁶

Causes of scar endometriosis include iatrogenic transplantation of endometrial tissues to the surgical wound. It was suggested that, during caesarean section precaution needs to be taken to avoid transplantation of endometrial tissue into abdominal incision.³

These ectopic endometrial tissues respond in varying degrees to the cyclical changes in ovarian hormones. Unlike normal endometrium, they do not have an ordered blood supply but there is an in-growth of new capillaries. Cyclical bleeding can occur within and from, the endometriotic

deposits and this contributes to a local inflammatory reaction. With healing and subsequent fibrosis, overlying peritoneal damage will lead to adhesions between associated organs. Ovarian implants lead to the formation of chocolate cyst or endometriomas.⁶

The smallest (and presumably earliest) implants are great petechial lesions on the peritoneal surface. With further growth menstrual like detritus accumulates with in the lesions, giving it a cystic, dark brown, dark blue or black appearance. The surrounding peritoneal surface becomes thickened and scarred. These “powder burn” implants tropically attain a diameter of 5 – 10mm, with progression of disease the number of size of lesions increase and extensive adhesions may develop.⁶

Pain from endometriosis is thought to be due to stimulation from oestrogen and progesterone during menstrual cycle and also produced by pressure and inflammation within and around the lesion, by traction on adhesions within the lesions, by the number of implants and there proximity to nerves and other sensitive structures and by the mass effect of large lesions. Degree of pain is perhaps determined by the depth of invasion. Moderate and severe endometriosis is associated with pelvic adhesions that distort pelvic anatomy, prevent normal tubo-ovarian apposition and encase the ovary.⁷

Classification system: Several systems have been developed to classify disease severity. The most widely used is one developed by the American Society for Reproductive Medicine (ASRM) The system was designed to assist in the prognosis and management of patients undergoing surgery for sub fertility. Peritoneal Endometriosis: Peritoneal endometriosis comprises lesions scattered over the peritoneal serosal and ovarian surfaces. Superficial lesions on the ovarian cortex become inverted and invaginated and that

endometriomas are derived from functional ovarian cyst or metaplasia of the coelomic epithelium covering the ovary. DIE (Deeply infiltrating disease) nodules which extend >5mm beneath the peritoneum. Risk factors including age, increased peripheral body fat, and greater exposure to menstruation (i.e. short cycles long duration of flow and reduced parity), where smoking exercise, and oral contraceptive. Possible mechanism of endometriosis associated with sub fertility include the tubal dysfunction, failure oocyte collection, ovulation dysfunction, lutenized unruptured follicle syndrome, peritoneal inflammation with local immune activation, dyspareunia, if present, often as a part of pelvic pain, can also affect fertility by reducing sexual activity.⁷

Symptoms: No one symptom is totally predictive of endometriosis, but one symptom is highly suggestive that of spasmodic dysmenorrhoea and if unresponsive to normal analgesics. Pelvic pain throughout the cycle or deep dyspariunia, this should heighten the suspicion of endometriosis. The occurrence of abnormal cyclical bleeding at the time of menstruation from the rectum, bladder or umbilicus is strongly suggestive of the presence of this disease. When endometriosis in the female reproductive tract than symptoms will be dysmenorrhoea, lower abdominal and pelvic pain, dyspanuria, rupture or torsion, endometrioma, low back pain, infertility. If lesion to urinary tract causes cyclical haematuria, dysuria, ureteric obstruction. If lesion to gastrointestinal tract causes dyschezia, cyclical rectal bleeding and obstruction. If lesion to surgical scar or umbilicus causes cyclical pain and bleeding. If lesion to lungs causes cyclical haemoptysis, haemopneuthorax. Other symptoms are intermittent pyrexia due to absorption of degenerated products of the retained blood.⁷

The diagnosis depends on the sites involved. Commonly involved ovaries enlarge with

endometrioma or uterosacral ligaments become nodular and tender and can be felt by manual pelvic examination. A fixed retroverted tender uterus indicates disease in the pouch of Douglas. Untrasound is useful for distinguishing between adenexal enlargements. Tumour markers CA125 (carcinoma antigen 125) can be used as a marker for extensive disease, but is also found to be elevated in 2.6% of healthy women and up to 20% of those with benign gynaecological conditions. CA125 is not very helpful in monitoring results medical treatment. Other markers such as placental protein 14 are less helpful. Laparoscopy is essential helpful for staging of disease.⁷

Treatment: Treatment is based on age, presenting symptoms, desire for future fertility and severity of condition according to the AFS classification.

Minimal to mild endometriosis: Endometriosis without mechanical distortion of tubes and ovaries. Conservative surgery initially laparoscopically followed ovarian stimulation with intrauterine insemination.

Moderate to sever endometriosis: Endometriosis with mechanical distortion of tubes and ovaries: by open surgical techniques release of anatomical distortion followed by ovarian stimulation with assisted reproduction.

Symptomatic endometriosis: Definitive surgery: Hysterectomy with bilateral salpingo-ophorectomy for pain if pregnancy is not a requisite. For pain symptomatic non steroidal anti-inflammatory drugs and hormonal therapy specially DANAZOLE and also oral contraceptive pills, progestin's, gonadotropin releasing hormone agonist, aromatase inhibitors and Hormonal therapy is used for stimulation and inhibition of gonodotropin hormones for maintaining fertility and prevention of adhesions.⁸

In this reported case due to endometrial reaction during the hormonal (oestrogen and

progesterone) cycle changes of ovaries and uterus, there causes local inflammatory reaction by secreting growth factors and cytokines. Before pregnancy she was suffering from endometriosis and during LUCS by implanting endometrial tissue to scar, develops scar endometriosis. USG found nodules in the pelvis structures of various sizes even more than 5mm, so it is deeply infiltrating disease. Throbbing pain is due to mass tissue involvement and local inflammatory reaction of endometrial tissue. Colicky pain is caused by surrounding peritoneal adhesions. Except USG and histopathology report, no other investigations found any relevant or abnormal findings. So on history taking, clinical findings, on USG and report of histopathology, this case has been diagnosed as scar endometriosis.

Conclusion

All current therapies offer relief but not cure. Even after definitive surgery, endometriosis may recur. Oestrogen replacement therapy does not significantly increase the risk of recurrence but after conservative surgery reported recurrence rates are more. Pregnancy delays but does not preclude recurrence. Definitive surgical treatment followed by long term oestrogen therapy shows better result. However the future treatment options should greatly improved upon what is offered now.

Author Affiliations

1. * Dr Fayela Sabrun Siddiquee, Assistant Registrar of Genecology & Obstetrics, Community Based Medical College Hospital, Bangladesh
2. Dr Shila Sen, Associate Professor of Genecology & Obstetrics, Community Based Medical College Hospital, Bangladesh
3. Dr Md Mahbubur Rahman, Curator of Anatomy, Mymensingh Medical College, Mymensingh, Bangladesh

* *For correspondence*

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