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Case Report

A case report of scar endometriosis with bladder endometriosis

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ABSTRACT

Endometriosis is a common gynaecological condition which occurs in 10-15% women of reproductive age group. It can occur in pelvic and extra pelvic regions like urinary tract, abdominal wall, nervous tract, gastrointestinal tract, nose, lungs, umbilicus and sciatic nerve tract. Previous abdominal wall surgery can lead to scar endometriosis based on implantation theory which is very rare and this is hormone dependent. Here we are presenting a case of recurrent scar endometriosis along with bladder endometriosis which is extremely rare. The common cause for scar endometriosis is caesarean section and hysterotomy. Rarely it can occur following laparoscopy and amniocentesis. The diagnosis is based on the symptoms which are cyclical. USG and MRI can help in the pre-operative diagnosis and FNAC can confirm the diagnosis. Management of scar endometriosis is mainly wide excision of the lesion. Medical management can only be temporary. COCs, progesterone, dienogest and GnRH analogues are the drugs for medical management. Recurrence of scar endometriosis is also rare and association with bladder endometriosis is still rare. Malignant changes are almost less than 1%. This patient had scar endometriosis, bladder endometriosis and adenomyosis, fimbrial endometriosis and ovarian endometrioma. All were excised and post-operative suppression with GnRH was given for 3 months and LNG-IUS was inserted for prevention of recurrence as well as for management of adenomyosis.

Keywords: Scar endometriosis, Bladder endometriosis, Abdominal scars, Surgical management, Rare malignant change

INTRODUCTION

Endometriosis is defined as the presence of stroma and glands outside the uterine endometrium which affects 10-15% women of reproductive age group.[1] Endometriosis generally occurs in pelvis and extra pelvic regions like urinary tract, abdominal wall, nervous tract, gastrointestinal tract, nose, lungs, umbilicus and sciatic nerve.

Commonest cause for abdominal wall endometriosis is due to previous surgical procedures done during gestation. The common theory for abdominal wall scar endometriosis is the direct implantation of endometriotic tissue over the scar during surgery which responds to hormonal stimulation and develops into scar endometriosis. Implantation theory can explain the presence of endometriosis in the post-operative scar following cholecystectomy, appendicectomy especially when surgery is done immediately after menstruation. Other etio-pathogenesis are retrograde spill, coelomic metaplasia theory, lympho-vascular theory, genetic and stem cell theory which can cause endometriosis. The sites of scar endometriosis need not be above the scar always. It can be away from the Pfannenstiel scar also.

CASE REPORT

34 year old Mrs. D came with h/o pain over the previous caesarean scar site for the past 3 months. She gave h/o excision on the scar endometriosis in the left side of the scar 2 years ago in our institution. Her menstrual cycles are

normal associated with mild dysmenorrhea and pain over the scar site. She was married for 14 years and her obstetric code was P4L3A1.

First was a normal delivery, 2nd was an abortion. 3rd was caesarean section and 4th was hysterotomy done at 16 weeks of gestation along with sterilisation. Her last child birth was 6 years back. She also had progressive dysmenorrhea, cyclical dysuria and dyspareunia. There was no significant family history. She is not a known case of auto immune disorder, diabetes and hypertension.

Her general condition was good. On abdominal examination there were 3 scars in suprapubic region 1 caesarean section, 1 hysterotomy and the other due to previous excision of scar endometriosis. There was a nodular thickening of the scar in the right side around 3.0×3.0 cm. On per speculum examination, cervix was healthy and on vaginal examination uterus was bulky with restricted mobility. Hence clinical diagnosis of recurrent scar endometriosis and adenomyosis was made. USG showed 3.0×4.0 cm mass in the right side of the scar in the subfascial plane. There was mild posterior wall thickening of the bladder. Uterus was adenomyotic and there was a haemorrhagic cyst of right ovary. Basic investigations were done pre-operatively and found to be normal.

Patient was posted for excision of scar endometriosis under spinal anaesthesia. On opening the abdomen through Pfannenstiel incision more on the right side of the previous scar, there was 4.0×4.0 cm mass on the right side extending up to the mid-line and on excision, the mass was found to be extending up to the peritoneum. Hence, peritoneum was opened and entire mass excised. Uterus was adenomyotic and enlarged to 6-8 weeks size. Right ovary had a haemorrhagic cyst. There was tubal endometriosis seen on the left side. Hence, right ovarian cystectomy and left salpingectomy were done. Left ovary was normal. On further examination, posterior fundal surface of bladder had a mass of 1.5×2.0 cm and based on h/o dysuria and associated scar endometriosis, on table diagnosis of bladder endometriosis was made. Incision was made over the bladder and lesion was extending up to the bladder mucosa.

Ureteric orifices were far away from the lesion. Mass was excised and bladder was closed using 3-0 vicryl in 2 layers and abdomen was closed in layers after keeping a subcuticular and sub-fascial drain. Foleys catheter was inserted and advised removal of catheter after 14 days. Patient recovered well. Here, we are presenting a case of recurrent scar endometriosis, bladder endometriosis, fimbrial endometriosis and adenomyosis. Tissue biopsy was reported to have scar endometriosis, bladder endometriosis along with fimbrial endometriosis.

Post-operatively patient was given GnRH analogues monthly depot for 3 months and LNG-IUS was inserted to treat adenomyosis and to prevent the recurrence of pain and scar endometriosis.

Figure 1: Endometriosis of the bladder.

Figure 2: After excision.

Figure 3: After closure.

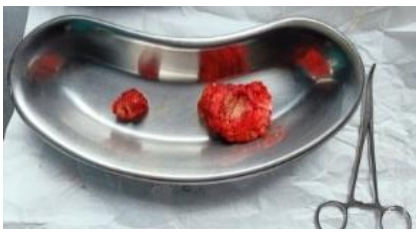

Figure 4: Specimen.

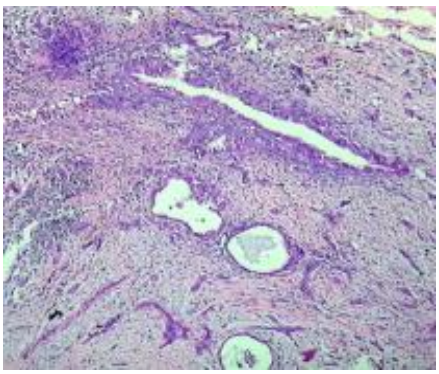

Figure 5: Hisptopathology.

DISCUSSION

Scar endometriosis usually occurs after early hysterotomy or LSCS. The incidence of scar endometriosis was 0.08%.[2] It can also occur following surgeries done for ectopic pregnancies, puerperal sterilisation, laparoscopy, amniocentesis, appendicectomy, episiotomy and hernia repair.[3-5] The incidence of scar endometriosis was around 1-2% after hysterotomy and following LSCS around 0.03% to 0.4%. Multiple LSCS increases the incidence of scar endometriosis.[6] Most possible theory that could explain scar endometriosis was mechanical implantation of tissues which responds to hormonal influence. The endometrium gets implanted during surgery. De -Oliveira et al in 2007 described smoking and alcohol consumptions are possibly related to scar endometriosis. Very rarely primary cutaneous endometriosis can occur without previous abdominal surgery.[7] Clinical diagnosis of scar endometriosis can be arrived by careful history, examination and presence of mass over the previous scar site and cyclical pain during menstruation. In this particular patient, history of previous caesarean section and hysterotomy along with surgical excision of scar endometriosis were highly pointing towards recurrent scar endometriosis.

The duration of onset of scar endometriosis may vary from few years to 23 years from the initial surgical event. In this particular patient, previous history of hysterotomy was 6 years ago and previous excision of scar endometriosis was 2 years ago. The presence of previous history of scar endometriosis was on the left side but currently the lesion is on the opposite side. The risk of developing malignancy in the scar endometriosis is very rare. But it may increase as the patient ages and the common malignancies are adenocarcinoma and clear cell carcinoma. The differential diagnosis are granuloma, chronic stitch abscess, neoplasm, metastatic cancer, desmoid tumour, neuroma, malignant melanoma, inguinal and incisional hernia.[8] In general, scar endometriosis patients are treated by general surgeons rather than the gynaecologist. Correct pre-operative diagnosis can be achieved in 20-50% of the patients but the diagnosis may be more accurate among gynaecologist who have a keen interest on endometriosis.[5]

The diagnosis can be confirmed by USG, CT, MRI and fine needle biopsy.[9] Commonly used modality is USG, where it appears as a heterogeneous mass with hypoechoic area with irregular margins. Kinkel et al reported that USG has sensitivity and specificity of 90-92% and 91% to 98% and it can also pick up the underlying adenomyosis and deep pelvic endometriosis also.[10]

Fine needle aspiration cytology (FNAC) is indicated only in atypical presentation and doubtful diagnosis. Macroscopic view of scar endometriosis shows fibromatous tissue and brown to black hemosiderin pigments. Histopathology is the hallmark of diagnosis, where there is presence of glands, stroma and hemosiderin pigments. Stroma is always more in scar endometriosis.[11]

Local wide excision is the treatment of choice. Recurrence of scar endometriosis is very rare. This particular patient had associated bladder endometriosis which could be explained by the same implantation theory or coelomic metaplasia theory. This patient had associated bladder endometriosis, adenomyosis and fimbrial endometriosis. Wide excision of lesion has to be done followed by closure and patient might need a mesh repair in case of wide defect.[6] Pre-operative medical therapy including NSAIDs, COCs, dienogest, a romatase inhibitors, GnRH analogues can give only temporary suppression and the lesion recurs after stopping the treatment. Incidence of associated pelvic endometriosis and scar endometriosis is 14.2-26%.[12]

Currently the incidence of scar endometriosis is increasing probably because of increasing caesarean section. A triad of cyclical pain, mass, H/O of previous abdominal surgeries may be pointing towards scar endometriosis. Dragoumis et al described the scar endometriosis as utero-cutaneous fistula. Prevention of scar endometriosis is by proper closure of visceral and parietal peritoneum at the time of LSCS without locking sutures.[13] It is preferable to use two different suture materials for uterine closure and peritoneal closure. It is not recommended to elevate the uterus outside the abdominal cavity during LSCS. Few suggest abdominal wall wound should be irrigated with high jet solution but none of the methods are found to be protective. If the disease is not diagnosed earlier it can compromise the skin, subcutaneous tissue, aponeurosis and peritoneum. Urinary tract endometriosis occurs in 1% of the women affected by endometriosis and the most common involvement is bladder. It may also involve the ureter. The incidence of urinary tract endometriosis is increasing currently from 0.3 to 12%. It may be part of the deep infiltrating endometriosis where the anterior compartment is involved. Deep infiltrating endometriosis of the anterior compartment can affect the bladder in 85% of the cases and the commonest complaints are cyclical dysuria, dyspareunia and haematuria. The diagnosis of bladder endometriosis is mainly clinical and supported by imaging studies.

Bladder endometriosis has glands and stroma within the detrusor muscle mainly at the base and the dome. Bladder endometriosis can occur spontaneously following pelvic surgeries such as caesarean section, hysterotomy and it is associated with other pelvic endometriosis. Bladder endometriosis should not be considered as the independent form of the disease. In this particular patient bladder endometriosis was associated with scar endometriosis, fimbrial endometriosis and adenomyosis. It should be dealt by both urologists and gynaecologists. Origin of bladder endometriosis may be from metaplasia of the Mullerian remnants which occur in both adenomyosis and bladder endometriosis. Iatrogenic form of bladder endometriosis is commonly proposed by Abeshouse et al who pointed out 39 out of 59 patients had previously undergone gynaecological procedures such as caesarean section, hysterectomy or hysterotomy, occasionally bladder endometriosis can be isolated. It can be diagnosed by USG,

MRI, and cystoscopy.[14] It has to be differentiated from interstitial cystitis, bladder cancer, bladder pain syndrome (BPS). Goodmann et al first described bladder endometriosis.[15] It appears as a filling defect in the posterior wall which is seen either as iso or hypoechoic mass in TVS, trans abdominal USG and they may not be vascularized and borders are usually regular. Occasionally it can be irregular and spiky and papillary projections with vascularity are suggestive of malignancy. Accuracy by TVS is more than trans abdominal USG. MRI is usually done if malignancy is suspected.

Medically it can be managed with combined OCP's, GnRH analogues and progestins which may reduce the size of the lesion. It has to be given for a longer period. Westney et al reported partial or complete resolution of the symptoms in 92% of the patients.[16] According to Fedele et al reported GnRH analogues gave a better resolution of the lesion than COCs and progestins.[17] Dienogest can also be given for treatment of bladder endometriosis which gives relief of cyclical dysuria, haematuria in smaller bladder lesions.[18] Aromatase inhibitors along with progestin can also be tried. Recurrence is known to occur after discontinuation of the medical management. Cystoscopy is a diagnostic procedure done in the OPD set up, where on direct visualization of the urinary bladder shows the endometriotic lesion which protrudes towards mucosa. Unless the mucosa is involved, cystoscopy may not pick up the lesion and the ideal time to do cystoscopy is during menstruation. Cystoscopy aids in delineating the margin of the bladder endometriosis and proximity to the ureteric orifice.

Trans uretheral resection (TUR) can be safely done in the event of smaller lesion. Occasionally TUR may lead to perforation of the bladder. Other methods are excisions of the lesion or partial cystectomy which may be done through laparoscopy or laparotomy. If the ureteric orifices are close to the lesion, they may need re-implantation. Fertility is possible after excision of bladder endometriosis. Malignant transformation of bladder endometriosis is possible and endometrioid carcinoma and clear cell carcinoma are the commonest.

CONCLUSION

Scar and bladder endometriosis are rare conditions and their co-existence is all the more very rare. TAS/TVS helps in diagnosis. MRI is done if it is not confirmed by USG. Conservative treatment is possible with medical management. Surgical management is preferred when there is a persistence of symptoms even after medical management. Ureteric involvement needs only surgical management. Recurrence and malignant transformation are rare.

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