Case Report

Abdominal wall endometriosis: reports of three cases

Mahjabeen N[a], Mahmud S[b]

ABSTRACT

Endometriosis is growing of endometrial cells in places other than normal uterine cavity. Endometriosis commonly affects ovaries and fallopian tubes. But it can occur anywhere in the body. Rarely it can develop within the abdominal wall. Abdominal wall endometriosis may happen after Caesarean section or any other pelvic surgery. Patients mainly present with abdominal pain. We are reporting 3 cases of abdominal endometriosis. They had history of lower segment Caesarean sections. They had pain and palpable lumps in the site of previous surgical scars during menstruation. Among the 3 cases, 1 patient underwent surgery and other 2 patients refused to do surgery. Orally Dienogest was administered to those 2 patients. All of them were improved. Scar endometriosis is not very common. There are medical and surgical options of management, among which surgery is more preferred. It can be diagnosed radiologically. Preventive methods should be undertaken to avoid endometrial tissue implantation which leads to scar endometriosis.

Key words: *endometriosis, Caesarean section, abdominal wall, surgical scar.*

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INTRODUCTION

Endometriosis is a disorder where endometrial-like tissue forms and develops in other regions of the body instead of uterine cavity.[1] It affects more than 190 million women globally. It is an estrogen-dependent disease, that is influenced by sex hormone, immunity, inflammation and hereditary means.[2] Scar endometriosis is a very rare variety of extrauterine endometriosis. Scar endometriosis usually occurs after Caesarean section.[3] Some patients may remain asymptomatic. But many patients present with typical symptoms, as abdominal lump, pain and pain increases during menstruation.[4] Pain may be continuous dull aching or cyclical. Surgery and medication are the mainstays of treatment. However, high rate of recurrence is also found after surgery.[5] The diagnosis is primarily done by ultrasound. But computed tomography (CT) scan and needle aspiration (FNAC) may be done to support the diagnosis.[6] Excision and biopsy can make a definitive diagnosis.[7] Progesterone is utilized in the therapy of endometrial-mesenchymal transition because it can cause decidual-like alterations in the endometrium, which can lead to endometrial shrinkage.[8] It also negatively inhibits the hypothalamic-pituitary-ovarian (HPO) axis.[9] But certain medications have adverse effects and should not be used for an extended period. Dienogest (DNG), a newly developed progesterone, anti-estrogen and antiandrogen with a favorable safety and tolerability profile, has been shown in experiments to relieve the pain and reduce the size of scar endometriosis simultaneously.[10] The impact of lowering the size become more substantial as the medication is taken longer. DNG could also prevent the recurrence and progression of endometriotic lesions, as well as, the recurrence of pain, by acting as an anti-inflammatory and anti-angiogenesis agent.[11]

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CASE REPORT

Case 1

A 32-year-old lady presented at gynae outpatient department (OPD) with severe lower abdominal pain and a lump in scar area of previous Caesarean scar. She was admitted to reduce her pain and for further management.

She had history of regular menstrual cycles but severe dysmenorrhoea. She is married for 7 years. Her first child is female who is 5 years old now, was delivered by emergency Caesarean section due to fetal distress. She was not using any contraceptive. She had no family history of gynecological malignancy.

She underwent another emergency Caesarean section 5 years back at another center. Skin was closed with absorbable suture (polyglactin). Her postoperative period was uneventful and she was discharged at 3rd postoperative day. On 7th postoperative day, she came for follow up visit and the wound was healthy. She maintained exclusive breast feeding and developed lactational amenorrhea (LAM) for 1 year. When her menstruation resumed after 1 year, she gradually developed pain in the right side of the Caesarean scar. Pain was increased during menstruation. Then for last 3 years, she also noticed a palpable lump. The size of the lump was increasing. It used to become harder and tender during menstruation. Cough impulse was negative in the lump area. There was no discharge from the affected site.

On her general examination, vital signs were stable. She had neither anemia nor jaundice. There was no edema or dehydration and thyroid gland was not palpable. On per abdominal examination, there was a Pfannenstiel incision scar mark in the lower abdomen. A tender nodule was present on the right side of the scar about 4 cm x 3.5 cm. Per vaginal examination revealed no abnormality.

An ultrasonography revealed scar endometriosis. CT scan also revealed endometriosis in subcutaneous plane. Per operatively wide excision of the lump and repair of the defect were done (Figure 1). It was involving the outer layer of rectus sheath. On cut section of the specimen, chocolate color material was found (Figure 2).

Figure 1. The resected endometriotic mass

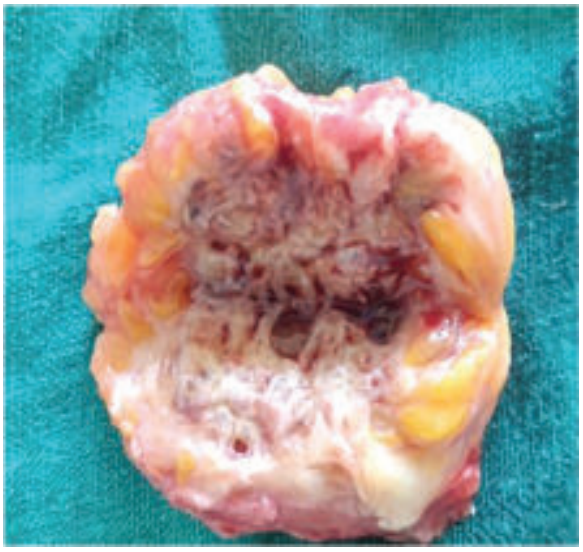

Figure 2. Cut section of the resected mass

Histopathological examination showed endometrial glands, lined by benign endometrial cells. The glands are surrounded by stromal cells and himosiderin laden macrophages (Figure 3).

Her postoperative period was uneventful. So, she was discharged on 2nd post operative day. She came for follow up on 7th postoperative day and the wound was healthy.

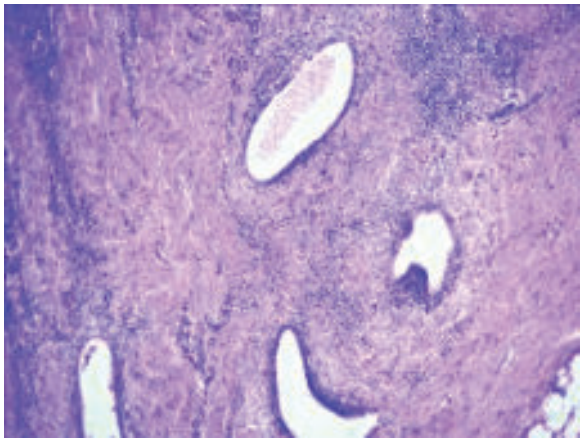

Figure 3. Histopathology of the resected mass showing endometrial glands and stroma

Case 2

A 37-year-old woman, presented with the complaints of pain and swelling in the Caesarean scar area for last 1 year. She had history of 2 previous Caesarean sections and 1 normal delivery. Her pain increased during menstruation in the scar area.

On examination, the nodule was about 3 cm x2 cm in the right side of Pfannenstiel incision mark, tender, firm having well-defined margin and non-reducible. Trans-abdominal ultrasound revealed an anechoic mass. FNAC from the lump revealed scar endometriosis (Figure 4).

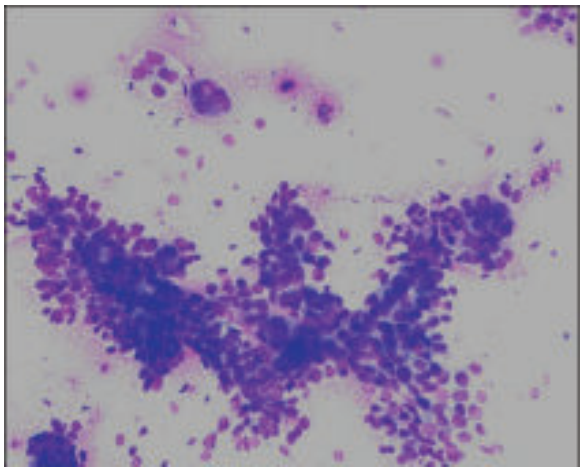

Figure 4. Endometrial glands, stromal cells and macrophages in FNAC

We offered patient surgical excision but patient refused. So, we gave orally Dienogest for 6 months. Follow up was done at 1month, 3 months and 6 months. The mass was diminished.

CASE 3

A 38-year-old woman presented with a swelling at the site of previous Caesarean section scar. She had also intermittent pain in that swelling during menstruation. She had undergone lower segment Caesarean section 6 years back due to fetal distress. She has noticed the lump for last 1 year.

On her per-abdominal examination, a tender nodule, measuring about 3 cm x 1.5 cm was palpated. It was located on left side of Pfannenstiel incision scar. It was hard in consistency, immobile, not attached with overlying skin but seemed to attached with underlying muscle. The overlying skin was slightly elevated but there were no color changes or any sinus tract.

Ultrasound revealed an heterogenous hypoechoic mass. FNAC was done to confirm the diagnosis and it revealed endometrial glands and stroma. Based on these, scar endometriosis was established. We started analgesic and dienogest. She came for follow up at 3 months and 6 months. Her pain was reduced and size was also diminished.

DISCUSSION

Scar endometriosis commonly happens after Caesarean section. The incidence of scar endometriosis is about 0.03% to 1.5%.[12] Its exact cause and pathophysiology is not still well understood. But it is illustrated in different publications that, this condition happens when endometrial tissue becomes implanted at the incision site and grows gradually with the cyclical hormonal changes.[13]

Katwal S et al described 3 cases of scar endometriosis, for which they did surgical excision without any recurrence.[14] Scar endometriosis usually presents as a small lump in the lower part of anterior abdominal wall. It may be associated with pain which increases during menstruation. Our 3 cases have lump and cyclical pain. Differential diagnoses include lipoma, granuloma, sebaceous cyst, desmoid tumor and hematoma. Ultrasonography, CT scan and magnetic resonance imaging are used to ascertain the diagnosis. Imaging findings may vary with the cycle of menstruation. However, to rule out the malignancy, FNAC should be done. Lastly, biopsy gives us the conclusive diagnosis.

Some studies showed that FNAC has 100% sensitivity in diagnosing scar endometriosis. FNAC can illustrate glandular epithelial cells, stromal cells and hemosiderin-laden macrophage, which help in diagnosis.[15] In our cases FNAC suggested scar endometriosis.

Surgical resection with wide margin is the preferred management. Studies also showed less or no recurrence after surgical resection.[16,17] But in our cases, one patient underwent resection and two other patients refused. They got dienogest (a variety of progesterone) and also improved. High intensity focused ultrasound ablation is also a newer approach, alternate to surgery. There are also other medical options of management as, combined oral contraceptive pills, progesterone, danazol, gonadotropin releasing hormone analogues. These can be used to prevent recurrence, new growth or as primary medication.[18]

Conclusion

Scar endometriosis is a rare condition, that may mimic malignancy. But an accurate diagnosis can be made with a holistic approach including clinical, radiological and histopathological evaluations. Wide surgical excision is preferred to relief pain and prevention of recurrence but dienogest may be an alternative. Further researches are needed to know exact pathophysiology and risk factors to prevent this.

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Consent: Informed written consent was taken from the patients for writing and publishing the case report and accompanying images.

REFERENCES

1. Saliba C, Jaafoury H, El Hajj M, Nicolas G, Haidar Ahmad H. Abdominal Wall Endometriosis: A Case Report. Cureus 2019 Feb 13;11(2): e4061.
2. Evruke IM, Babaturk A, Akbas G. A Rare Occurrence of Endometriosis Externa Individually Within the Rectus Abdominis Muscle. Cureus 2023 Jan 11;15(1): e33662.
3. Thanasa A, Thanasa E, Kamaretsos E, Gerokostas EE, Thanasas I. Extrapelvic endometriosis located individually in the rectus abdominis muscle: a rare cause of chronic pelvic pain (a case report). Pan Afr Med J 2022 Jul 29;42:242.
4. Zondervan KT, Becker CM, Koga K, Missmer SA, Taylor RN, Viganò P. Endometriosis. Nat Rev Dis Primers 2018 Jul 19;4(1):9.
5. Benagiano G, Brosens I, Lippi D. The history of endometriosis. Gynecol Obstet Invest 2014;78(1):1–9.
6. Mehedintu C, Plotogea MN, Ionescu S, Antonovici M. Endometriosis still a challenge. J Med Life 2014;7(3):349–57.
7. Greene AD, Lang SA, Kendziorski JA, Sroga-Rios JM, Herzog TJ, Burns KA. Endometriosis: where are we and where are we going. Reproduction 2016;152(3):R63–78.
8. Andres MP, Arcoverde FVL, Souza CCC, Fernandes LFC, Abrao MS, Kho RM. Extrapelvic endometriosis: a systematic Review. J Minim Invasive Gynecol 2020;27(2):373–89.
9. Carsote M, Terzea DC, Valea A, Gheorghisan-Galateanu AA. Abdominal wall endometriosis (a narrative review). Int J Med Sci 2020;17(4):536–42.
10. Karaman H, Bulut F, Özalamac A. Endometriosis externa within the rectus abdominis muscle. Ulus Cerrahi Derg 2014;30(3):165–8.
11. Pados G, Tympanidis J, Zafrakas M, Athanatos D, Bontis JN. Ultrasound and MR-imaging in preoperative evaluation of two rare cases of scar endometriosis. Cases J 2008;1(1):97.
12. Mishin I, Mishina A, Zaharia S, Zastavnitsky G. Rectus abdominis endometrioma after caesarean section. Case Rep Surg 2016;2016:4312753.
13. Guerriero S, Conway F, Pascual MA, Graupera B, Ajossa S, Neri M, et al. Ultrasonography and atypical sites of endometriosis. Diagnostics (Basel) 2020;10(6):345.
14. Katwal S, Katuwal S, Bhandari S. Endometriosis in cesarean scars: A rare case report with clinical, imaging, and histopathological insights. SAGE Open Med Case Rep 2023 Aug 25;11:2050313X231197009.
15. Coccia ME, Rizzello F, Nannini S, Cozzolino M, Capezzuoli T, Castiglione F. Ultrasound-guided excision of rectus abdominis muscle endometriosis. J Obstet Gynaecol Res 2015;41(1):149–52.
16. Gupta P, Gupta S. Scar Endometriosis: a case report with literature review. Acta Med Iran 2015;53(12):793–5.
17. Garzon S, Laganà AS, Barra F, Casarin J, Cromi A, Raffaelli R, et al. Aromatase inhibitors for the treatment of endometriosis: a systematic review about efficacy, safety and early clinical development. Expert Opin Investig Drugs 2020;29(12):1377–88.
18. Mihailovici A, Rottenstreich M, Kovel S, Wassermann I, Smorgick N, Vaknin Z. Endometriosis-associated malignant transformation in abdominal surgical scar: a PRISMA-compliant systematic review. Medicine (Baltimore) 2017; 96(49):e9136.