



Scar endometriosis diagnosed by Fine Needle Aspiration Cytology

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ABSTRACT—*Endometriosis is characterized as the presence of functional endometrial like glands and stroma outside the uterine endometrial area. We report a case of scar endometriosis following a cesarean section, which was diagnosed on FNAC.*

A thirty two year old lady presented with lump over the anterior abdomen below the incisional scar since two years. She had complaints of increase of pain and tenderness during menstruation. She also gave history of a cesarean delivery eight years back. Abdominal and pelvic sonogram showed well defined hypo echoic lesion. Though USG findings were not conclusive, based on typical history, clinical and cytological features, a diagnosis of scar endometriosis was made.

FNAC can offer an accurate, cost effective, safe and noninvasive preoperative diagnosis of endometriosis thus it obviating the need for diagnostic surgical procedure.

Keywords: endometriosis, scar, FNAC

1, INTRODUCTION

Endometriosis is a common disease during reproductive age. It is characterized as the presence of functional endometrial like glands and stroma outside the uterine endometrial area. It generally occurs in the pelvic sites such as ovaries, posterior cul-de-sac, uterine ligament, pelvic peritoneum, and bowel and rectovaginal septum. It can involve variety of extra-uterine sites and is very rarely found cutaneous and subcutaneously¹

We report a case of scar endometriosis following a cesarean section, which was diagnosed on Fine Needle Aspiration Cytology (FNAC)).

2, CASE HISTORY

A thirty two year old lady presented with a lump over left side of anterior abdominal wall since two years. Additionally she had complaints of increase in pain and tenderness in a lump during the menstruation. She previously had cesarean delivery eight years back. On examination



the swelling was located below the left side of incisional scar. It measured 4x3 cm, was firm, tender with well-defined borders and was situated in subcutaneous plane. Abdominal and pelvic sonogram showed a well-defined hypo echoic lesion in subcutaneous plane in anterior abdominal wall on left side.

FNAC revealed hyper cellular smears composed of epithelial sheets and stromal fragments. The epithelial cells were uniform in size with moderate amount of cytoplasm. Nuclei were vesicular with inconspicuous nucleoli. The stromal fragments were loosely arranged in meshwork of capillaries and were bland, spindle shaped. There was no evidence of nuclear pleomorphic and atypical mitotic figures. The background showed numerous pigment laden macrophages and scattered chronic inflammatory cells.

Though USG findings were not conclusive, based on typical history, clinical and cytological features, a diagnosis of scar endometriosis was made.

3, DISCUSSION

Endometriosis occurring in a surgical scar is called scar endometriosis. An endometrioma refers to circumscribed mass of ectopic endometrial tissue. Minaglia et al , who analyzed 30 years of incisional endometriosis after cesarean section found the incidence of scar endometriosis to be 0.08%.² The reported incidence after mid trimester abortion is about 1% also after cesarean sections ranging from 0.03 to 0.45%.³

The strongest risk factor for development of scar endometriosis is early hysterectomies for abortion.⁴ Oliveira et al have demonstrated that heavy menstrual blood flow and alcohol consumption were positively related to scar endometriosis and conversely high parity may be protective factor.⁵

Diagnosis of scar endometriosis is usually made on clinical grounds. In clinically doubtful cases, FNAC has proven to be valuable diagnostic tool. Cytology smears show sheets of epithelial cells, spindle stromal cells and variable number of hemosiderin laden macrophages. The presence of any two of the three components is required for the diagnosis of endometriosis.⁶

Malignant transformation is rare but well documented complication of scar endometriosis. Sometime, the lesions may show blue black discoloration and ulceration, leading to erroneous suspicion of malignancy. Cytology is method of choice to monitor treatment and possible malignant transformation. Carcinomas that develops in endometriosis are almost always either endometrioid or clear cell carcinomas. Some arise in the setting of endometriosis with hyperplasia or in association with so called atypical endometriosis. Sarcomas that arises in association with endometriosis are generally either endometrial stromal sarcoma or mullerian adenosarcoma.⁷

Diagnosis of endometriosis is not always straight forward. Difficulties arise when it arises in unusual clinical setting and without characteristic bimodal pattern in the smears. Histological examination is advisable in order to differentiate endometriosis from malignancy, when atypical cytological features are seen in smears. Epithelial cell may undergo squamous,



mucinous or tubal metaplasia. Nuclear atypical and cytoplasmic vacuolation have been reported in the glandular cells during secretory phase.⁸ Sometimes the FNAC smears can be hemorrhagic showing only a few macrophages and inflammatory cells in which diagnosis of scar endometriosis can be missed. If only endometrial stroma is picked up it could be mistaken for a stromal neoplasm.

Direct mechanical implantation seems to be the most plausible theory for explaining scar endometriosis. During cesarean section endometrial tissue may be seeded into the wound and under the same hormonal influence these cell proliferate.⁹ Therefore it is strongly recommended before closure, the abdominal wound must be thoroughly cleaned and irrigated vigorously with saline.

Wide surgical excision with at least 1 cm margin on all the sides and patch defect if necessary is the treatment of choice. Medical management is not useful as recurrence is common after cessation of therapy. Our patient was treated with wide surgical excision with 1 cm margin on all sides and is free from recurrence till date.

4, CONCLUSION

FNAC can offer an accurate cost effective, safe and non-invasive preoperative diagnosis of endometriosis thus obviating the need for diagnostic surgical procedure.

Follow up of the patient is advised in view of recurrence.

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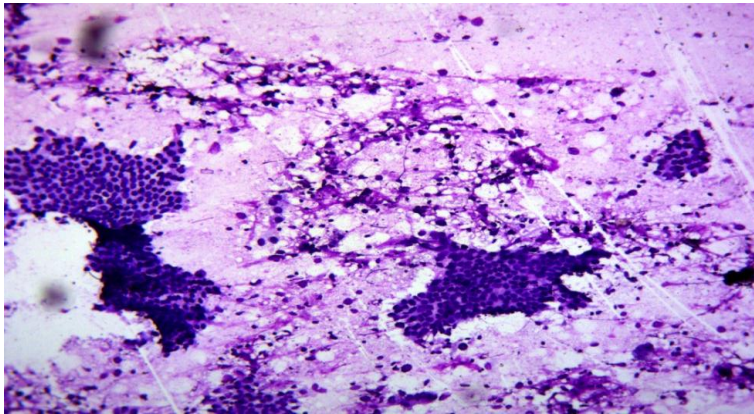


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Scar endometriosis pictures

Figure 1



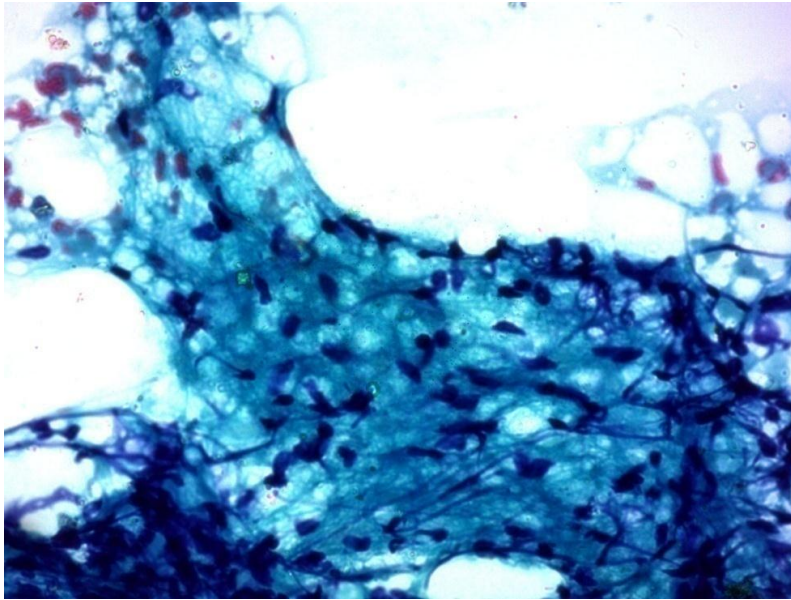
Cohesive clusters of glandular epithelium along with chronic inflammatory cells (MGG) 100X

Figure 2



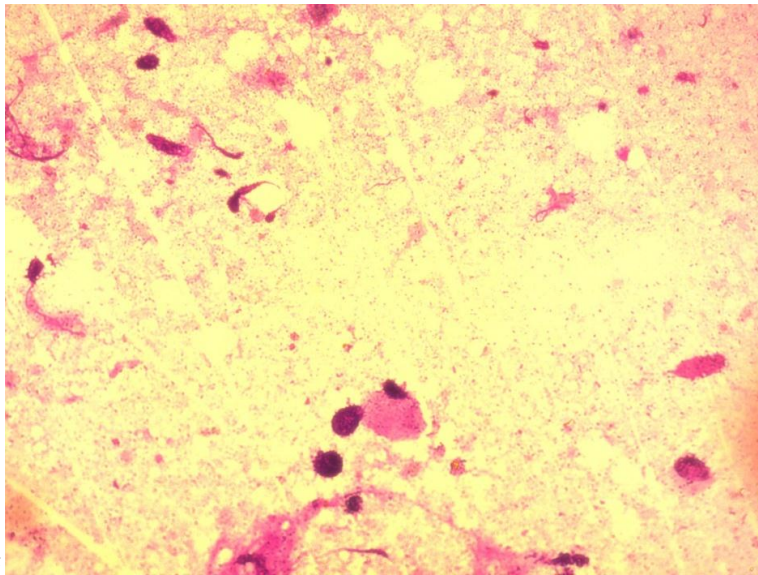
Sheet of glandular epithelium without atypia (pap) 100X

Figure 3



Fragments of stromal cells (pap) 400X

Figure 4



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Hemosiderin laden macrophages (MGG) 400X