

Episiotomy Scar Endometriosis Diagnosed on Cytology - A Case Report

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ABSTRACT

Endometriosis, the presence of functioning endometrial tissue outside the uterus, is a common gynaecological condition. Perineal endometriosis is a rare disease characterized by the presence of ectopic endometrial stroma and glands in the perineum. Most commonly observed in the episiotomy scar after normal vaginal deliveries, perineal endometriosis is not often considered in the differential diagnosis of perineal masses. This could lead to unnecessary investigations and inadequate patient treatments. Scar endometriosis is an infrequent type of extrapelvic endometriosis. Scar endometriosis can be a diagnostic challenge in Fine needle aspiration cytology (FNAC) smears that at times, is the first diagnostic modality in some cases. The challenge is amplified when the clinical details are limited and cytopathological features reveal nuclear atypia.

Keywords: Scar endometriosis, Perineal endometriosis, Differential diagnosis, Anisonucleosis

INTRODUCTION

Endometriosis is defined as the presence of endometrial tissue apart from its usual location. It is the second most prevalent benign gynecologic disease after the presence of fibroids in women of childbearing age [1,2]. Scar endometriosis is an infrequent type of extra pelvic endometriosis. Scar endometriosis should be considered when the symptoms are present in a scar in cyclic manner, mostly after gynaecological operations and worsening during menstruation [3,4]. FNA provide a simple and rapid diagnostic tool avoiding needle for invasive diagnostic procedures to resolve the differential diagnosis of palpable lump in abdominal wall. The cytological features of scar endometriosis is usually related to cyclical hormonal changes but with optimal FNA samples differential diagnosis of scar endometriosis can be ruled out [5-11].

CASE REPORT

A 38 year old female patient presented with a painful nodule over the episiotomy site for 2 years. She had a history of forceps delivery 12 years back. On examination, a tender, irregular, raised nodule measuring 2 × 2 cm was present in right perineal region over the site of the previous episiotomy scar [Figure 1]. She was

advised FNAC of the nodule which revealed clusters of round epithelial cells with round nuclei and moderate cytoplasm. Anisonucleosis was seen in few clusters with occasional macrophages, which were suggestive of endometriosis [Figure 2]. The scar with the nodule was excised and sent for histopathology. We received an irregular, partly skin covered tissue piece with polypoidal surface, total measuring, 5 × 4 × 1 cm and skin flap measuring 2 × 1.5 × 1 cm. Cut surface showed white areas below the skin. The histopathology sections revealed skin with epidermis showing focal acanthosis and irregular elevations. The subepithelial tissue showed islands of endometrial glands and stroma. Few glands appeared dilated. Lymphoid collections, histiocytes and focal areas showing neutrophils were also seen. The histopathological features were consistent with scar endometriosis with chronic inflammation at the episiotomy site [Figure 3].

Our patient was relieved of her presenting complaints, after the surgery.

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Figure 1: Clinical photograph-Dark brown, polypoid mass in right with crowded nuclei and scanty cytoplasm

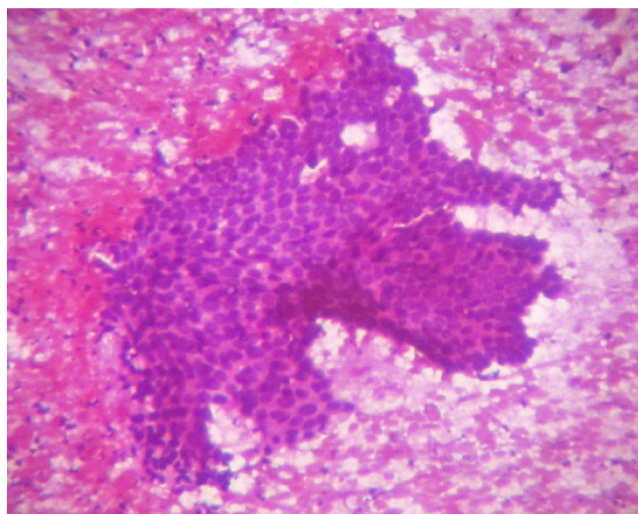


Figure 2: FNAC of the mass showing a sheet of endometrial epithelial cells perineum over the episiotomy scar.

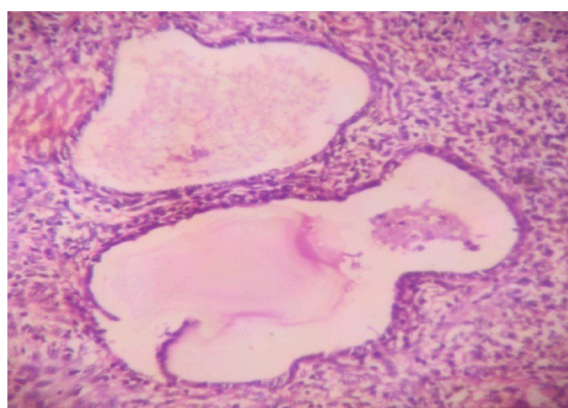


Figure 3: Photomicrograph showing dilated endometrial glands surrounded by stroma (Hematoxylin and eosin stain $\times 40$).

DISCUSSION

Endometriosis refers to functional endometrial glands and stroma lying outside the uterine cavity. Incisional endometriosis or scar endometriosis is Endometriosis occurring in a surgical scar [1]. The incidence has been estimated to be only 0.03% to 0.15% of all cases of endometriosis [3]. The disease affects nearly 10-15% of young fertile women, usually between 25 and 35 years of age [2]. It is mostly an endopelvic disease and commonly occurs in the ovaries, cervix, uterine ligaments and pelvic peritoneum. Extrapelvic endometriosis is a relatively uncommon disease, accounting for approximately 12% of all cases [4].

Endometriosis predominantly locates on peritoneal surfaces, but can also affect the vagina, vulva, recto-vaginal septum and perineum, usually secondary to surgical or obstetric trauma [1]. Scar endometriosis has also been reported in scars resulting from episiotomy, hysterectomy, tubal ligation, ectopic pregnancy, salpingectomy, uterine suspension, inguinal herniorrhaphy, bartholin cyst excision, episiotomy, laprotomy, abdominoplasty, laposcopic trocar tract and needle tract following diagnostic amniocentesis [2,4].

Several theories have been put forward for the development of endometriosis which includes metaplasia, retrograde menstruation, venous and lymphatic metastatization. Mechanical transposition is thought to be responsible for scar endometriosis [5]. The increased number of cases of incisional endometriosis occurring after opening of the gravid uterus, as well as the great trophic characteristics that make transplantation of endometrial tissue particularly successful within the surgical wound, are the stronger supporters of the mechanical transposition theory [4,6].

The diagnosis of scar endometriosis can easily be made clinically by a careful history and physical examination [6]. Most of the patients present with a tender, palpable subcutaneous swelling near or within the surgical scar. The cyclic nature of the swelling and pain, which worsen at the time of menstruation, and a frequently reported history of gynaecologic or rarely non-gynaecologic abdominal surgery, are pathognomonic [5,6]. Usually a triad of mass, cyclic pain, and previous incision is observed in scar endometriosis. A high index of suspicion is required, since a number of patients do not have the classic triad [7].

Diagnosis of scar endometriosis is usually made on clinical grounds. In clinically doubtful cases, FNAC is a valuable diagnostic tool. Cytology smears show sheets of epithelial cells, spindled stromal cells and a variable number of hemosiderin laden macrophages. The stromal cells are plump, spindled and arranged around a vascular meshwork. The presence of any two out of the three components is required for the diagnosis of endometriosis [8,9]. Sometimes, the FNAC smears can be

hemorrhagic showing only few macrophages and inflammatory cells, in which case the diagnosis can be missed. FNA is an inexpensive, rapid, and one of the accurate diagnostic tool in diagnosis of endometriosis [10,11].

CONCLUSION

Cutaneous endometriosis is a recognized pitfall on cytological smears [11]. The treatment of choice remains wide surgical excision to healthy margins, providing both diagnostic and therapeutic intervention. If the residual endothelial tissue persists it is usually associated with recurrences. The ectopic endometrial tissue can theoretically undergo malignant transformation and hence histological evaluation is necessary [10].

The differential diagnosis of endometriosis includes abscess, suture granuloma, neoplastic tissue, hernia, hematoma, hypertrophic scar tissue, traumatic neuroma, metastatic carcinoma. CT and MRI seem to be useful in differential diagnosis. Cytology is a method of choice to monitor treatment and possible malignant transformation in cases of endometriosis [12]. FNAC and histopathology is useful for confirmation of diagnosis, as also observed in our case [8,10].

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