

Deciduosis in a Cesarean Scar

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Abstract

Endometriosis is the term used to describe the presence of endometrial tissue at sites other than the uterus. It may rarely arise from scar tissue due to previous abdominal surgery such as cesarean section or episiotomy and may present with some histological features of decidual change, fibrosis, hyperplasia, metaplasia and calcifications. Here we present a case report of a 34 years old gravida who had a nodular thickening of previous surgical scar and it was diagnosed as a case of deciduosis.

Introduction

Endometriosis is the term used to describe the presence of endometrial tissue in abnormal locations outside the uterus. In most of the cases it consists of both endometrial glands and stroma, but it may also consist only of endometrial stroma.¹ Endometriosis is most commonly found within the pelvis including the ovaries, uterine ligaments, the recto-vaginal septum, and peritoneum. Unusual sites of endometriosis have also been reported such as the intestine, appendix, bladder and skin from scar, umbilicus, perineum and inguinal region.² Endometriosis may rarely arise from scar tissue due to previous abdominal surgery such as cesarean section or episiotomy.³ There are various histologic changes that can be seen in endometriosis such as decidual change, fibrosis, hyperplasia, metaplasia, atrophy, and calcification.⁴

Decidualization is a pregnancy induced change in which there is conversion of the normal endometrium into a specialized uterine lining adequate for optimal accommodation of the gestation. In this condition there is hypertrophy of the endometrial stromal cells and this leads to thickening of the normal endometrium and giving rise to the decidua. In rare cases there can be presence of ectopic decidua during pregnancy due to the hormonal effects on the ectopic endometrium and this phenomenon is called deciduosis.⁵ Deciduosis is usually asymptomatic and may remain undetected throughout pregnancy but occasionally it can grow rapidly during pregnancy and acquire an appearance that may grossly mimic a malignant tumor.^{6,7}

In this case report cesarean scar tissue was excised and histologically marked deciduosis was seen.

Case Report

A 34-years old gravida with a history of previous cesarean section underwent another cesarean section. Per-operatively the previous surgical scar tissue showed focal nodular thickening. Scar tissue was excised and referred to a private lab. Specimen was received in formalin fixative. The specimen measured 5x3x2cm. Cut surface showed pinkish white areas. Representative sections were routinely processed and microscopic examination showed decidualized endometrium within the dermal tissue. There was hypertrophy of the endometrial stromal cells and it was diagnosed as deciduosis in scar.

Discussion

Endometriosis that responds to hormonal stimulation (deciduosis) is extremely rare in a surgical scar and is present in 0.1% of women who have undergone Caesarean section.⁸ It is a bit tricky to diagnose endometriosis of the abdominal wall, inguinal region, or surgical scar when it is symptomatic and it is often confused with other pathologic conditions such as a lipoma, hernia, suture granuloma, abscess and primary or metastatic cancers.³ Whenever endometriosis is present at a cutaneous site, there is nearly always an associated surgical scar.⁹ There are several theories regarding the pathogenesis of endometriosis as its origin is unknown. These theories are of tubal regurgitation, an abnormal differentiation of certain areas of coelomic epithelium, direct extension along the round ligament from a neighboring process in the pelvis and vascular or lymphatic dissemination.¹⁰ Cutaneous deciduosis is a rare pathology and its etio-pathogenesis is still uncertain but it usually arises after some surgical treatment of the uterus or fallopian tubes and in surgical scars.¹¹ Morphologically there is presence of extra-uterine endometrial tissue in or under the skin.¹² Deciduosis occurring in the Cesarean scar may be secondary to iatrogenic transplantation of endometrium or extra-uterine decidual tissue into the incision during the cesarean section. It is observed that scar deciduosis is more frequently seen in scars after operations in which the uterus is opened as compared to laparotomy scars. The symptoms of scar endometriosis are related to the cutaneous mass or nodule that appears weeks to years after surgery and in one study the average postoperative interval was 30 months.² Chatterjee reported that 71% cases of scar deciduosis followed

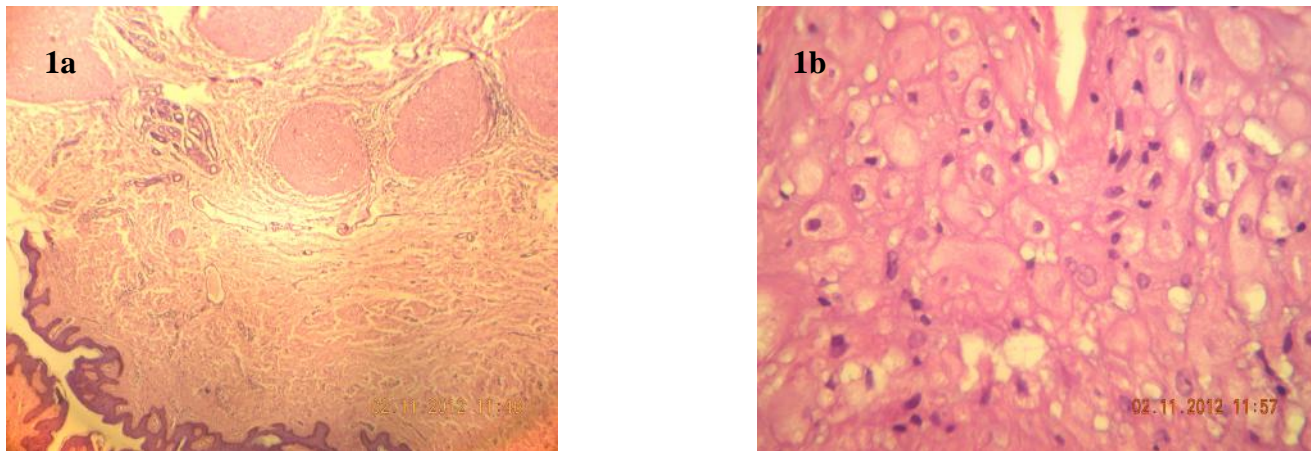


Figure 1: (a) Decidualized endometrium within dermis, beneath the epidermis H&E X 100. (b) High power view of decidual cells H&E X 400.

abdominal hysterectomy over a study period of 5 years and the incidence of scar endometriosis in the patients who underwent hysterotomy during this period was 1.08%.¹³ In another case endometriosis with massive decidualization was reported in a 25-year-old patient in which the lesion was extensive with ulceration.

This lesion mimicked a malignancy due to myxoid change with alveolar patterns reminiscent of some soft tissue sarcomas. Along with these features there was presence of pseudo-infiltration of the fascia.¹⁴ Such histologic features are not common and the dermato-pathologists unfamiliar with this gynecological pathology can misdiagnose it as a metastatic malignancy.¹⁰

McCluggage WG reported a case of decidualization which was involving the groin of a pregnant woman. The morphology of the lesion was unusual because of the presence of areas of decidualization and marked stromal myxoid change.¹⁵ Similarly tumor like myxoid change in decidualized scar endometriosis of pregnancy was reported by Arma and Gunal.¹⁶

Koger et al¹⁷ reported 24 patients with surgical scar decidualization in which majority of the cases had cesarean section scar. Similarly Daye et al¹⁸ recorded seven cases of scar decidualization in Pfannenstiel incision after cesarean section over a 3-year period.

Sammour RN et al presented 2 cases of decidualized ovarian endometriotic cysts in pregnant patients. The decidualized tissue within the cysts underwent thickening of the stroma and had acquired extensive blood supply. Due to these changes the sonographic appearance was similar to that of a malignant pelvic tumor.¹⁹

The treatment of decidualization may be surgical or hormonal depending upon the circumstances but usually surgical excision is sufficient for the treatment of non-decidualized and decidualized endometriosis of the abdominal wall or scar after Cesarean section.

Conclusion

Although the histologic diagnosis of endometriosis is usually easy, diagnostic problems can occur as a result of alterations or absence of glandular or stromal components, or when secondary changes are present, especially decidual change which is rarely seen. It can be confused with neoplasm clinically and histologically. Immunohistochemical and conventional histochemical tests can be help in differential diagnosis. Histopathologists should be aware of this phenomenon if erroneous diagnoses are to be avoided.

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