

Pregnancy associated endometriosis with pronounced stromal myxoid change

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Abstract

A case of endometriosis presenting as a mass in the groin of a pregnant woman is described. The mass increased in size during the pregnancy and the radiological features were suspicious of malignancy. Histological examination showed atrophic glands set in an abundant stroma. This was not typical of normal endometrial stroma but had a pronounced myxoid appearance with areas of decidualisation. The atypical site of the endometriosis together with the unusual stromal changes resulted in diagnostic confusion. Although stromal decidualisation is well recognised in endometriosis in pregnancy, pronounced myxoid change appears unusual. The myxoid change in this case may be a degenerative phenomenon related to pregnancy.

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Endometriosis is defined as the presence of endometrial tissue, usually both glands and stroma, outside the uterus. In most cases the histological appearances are characteristic and establishing a diagnosis is straightforward.

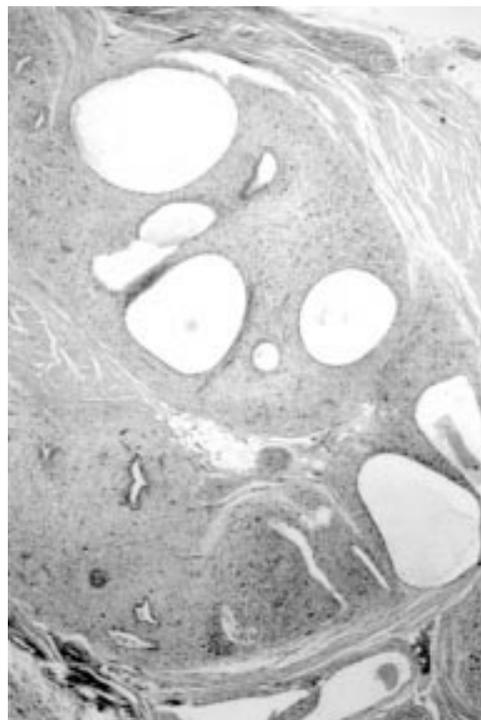


Figure 1 Atrophic glandular structures surrounded by stroma.

However, problems may arise because of metaplastic changes in the glands or when glands are absent or sparse, as in stromal endometriosis.¹ Secondary changes of fibrosis with haemosiderin or ceroid pigment deposition leading to replacement of glands or stroma may also occur, with resultant diagnostic difficulties.² Stromal decidual change may occur in pregnancy or with progestagen treatment.³

Endometriosis with stromal myxoid change has been rarely reported⁴⁻⁷ and many histopathologists may be unaware of this phenomenon, which is not described in standard pathology texts. In this report we describe a case of endometriosis with pronounced stromal myxoid change in a pregnant woman. The stromal changes resulted in diagnostic difficulties which were compounded by the relatively atypical location of the endometriosis.

Case report

A 25 year old woman, para 1+0, who was 20 weeks pregnant, presented with a two year history of a tender lump in the right groin. The lump was periodically painful but this was not related to her menstrual cycle. The lump had increased in size during the present pregnancy. On examination it appeared confined to the rectus muscle. Ultrasound scan showed a well demarcated lesion within the rectus muscle with focal areas of calcification. Clinically it was felt that this might have been a small plug of omentum in a hernia sac. However, the radiological features, specifically the irregularity of the mass and its high blood flow, were suspicious of a malignant lesion. At operation, a hard mass was present in the right groin. This lay within the inguinal canal and extended through the superficial ring.

Pathological findings

The surgical specimen weighed 21 g and measured 6 × 6 × 6 cm. Slicing revealed a poorly circumscribed white coloured lesion.

Histological examination showed a lobular arrangement with cellular elements separated by bands of fibrous tissue. The cellular elements contained central glands, many of which were dilated. These were lined by a single layer of rather atrophic cuboidal or attenuated epithelial cells with small regular nuclei and abundant eosinophilic cytoplasm (fig 1). There was no nuclear pleomorphism, and mitotic figures were not identified. Surrounding the glands, abundant stroma was present. Mostly this consisted of small bland ovoid to spindle shaped cells set in an abundant myxoid

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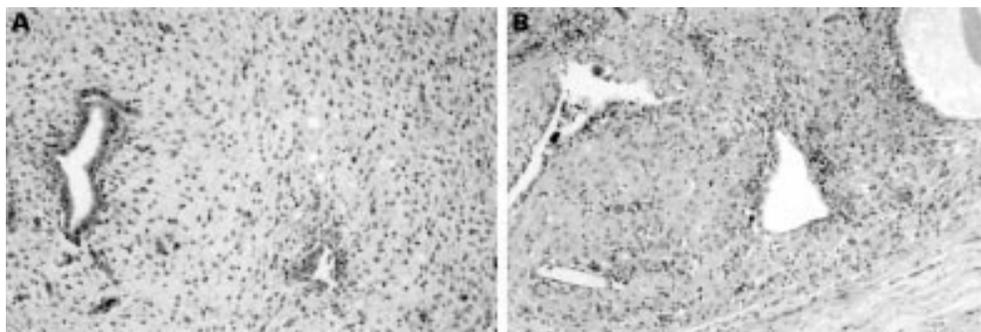


Figure 2 (A) Stromal component with ovoid to spindle shaped cells set in an abundant myxoid matrix. (B) In areas there is marked stromal decidualisation.

matrix (fig 2A). Elsewhere there was marked decidualisation of the stroma (fig 2B) and there were foci of calcification.

Discussion

As far as we are aware, there have been only four previous case reports of stromal myxoid change in endometriosis.⁴⁻⁷ Several of these have stressed the histological similarity to metastatic adenocarcinoma with pseudomyxoma peritonei and in one case a frozen section was erroneously interpreted as this.⁴ In another case vacuolated signet-ring-like cells of stromal origin were present in a myxoid matrix, mimicking a signet ring carcinoma.⁵

In the present case the patient was pregnant and the increasing size of the mass during the gestation resulted in clinical suspicion of malignancy. In one of the previous reports the patient was also pregnant, the endometriosis involving a scar from a previous caesarean section.⁵ Decidualised stroma was also present in this case and the authors speculated that the myxoid change may be degenerative in nature, similar to that occurring in ectopic decidual tissue in late pregnancy. In the other reports of stromal myxoid change in endometriosis, the patients were not pregnant.

The morphological admixture of glands and an abundant myxoid stroma raised a number of differential diagnoses. The diagnostic difficulties were compounded by the fact that the glands were not entirely typical of normal endometrium, the cytoplasm being abundant and eosinophilic. This reflects the wide morphological spectrum of endometrial epithelium. In addition, the glands were rather atrophic, in keeping with the progestational effects of pregnancy. An adenosarcoma (possibly metastatic from the uterus) or a synovial sarcoma were considered as possible diagnoses but the lobular architecture would have been against these. Moreover, the stromal compartment showed no overt malignant features. Other lesions likely to enter into the differential

diagnosis of myxoid endometriosis include mucinous adenocarcinoma and a variety of mesenchymal myxoid lesions, both benign and malignant.

The atypical location of the endometriosis in the present case was also a potential source of confusion. However, endometriosis within the groin, related to the inguinal canal, is known to occur and, as in this case, normally involves the right groin.³ The usual presentation is with a painful, hernia-like inguinal mass with exacerbation during menstruation in some cases.

In summary, we report a case of endometriosis involving the groin of a pregnant woman. The morphology of the lesion was unusual owing to the marked stromal myxoid change with areas of decidualisation. One of us (WGM) has seen minor degrees of myxoid change in endometriosis, but myxoid stromal alteration to this degree is extremely unusual and in this case may be a degenerative phenomenon related to pregnancy. A similar appearance can also rarely occur in endometriosis in non-pregnant women. Stromal myxoid change in endometriosis is not mentioned in most standard pathology texts and histopathologists should be aware of this phenomenon if erroneous diagnoses are to be avoided.

- 1 Clement PB, Young RH, Scully RE. Stromal endometriosis of the uterine cervix: a variant of endometriosis that may simulate a sarcoma. *Am J Surg Pathol* 1990;14:449-55.
- 2 Clement PB, Young RH, Scully RE. Necrotic pseudoxanthomatous nodules of ovary and peritoneum in endometriosis. *Am J Surg Pathol* 1988;12:390-7.
- 3 Clement PB. Pathology of endometriosis. *Pathol Annu* 1990;25:245-95.
- 4 Clement PB, Granai CO, Young RH, et al. Endometriosis with myxoid change. A case simulating pseudomyxoma peritonei. *Am J Surg Pathol* 1994;18:849-53.
- 5 Nogales FF, Martin F, Linares J, et al. Myxoid change in decidualised scar endometriosis mimicking malignancy. *J Cutan Pathol* 1993;20:87-91.
- 6 Hameed A, Jafri N, Copeland LJ, et al. Endometriosis with myxoid change simulating mucinous adenocarcinoma and pseudomyxoma peritonei. *Gynecol Oncol* 1996;62:317-19.
- 7 Ying AJ, Copeland LJ, Hameed A. Myxoid change in non-decidualised endometriosis resembling malignancy. *Gynecol Oncol* 1998;68:301-3.