Endometrial Stromal Neoplasm in the Placenta: report of a case and review of the literature

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Endometrial Stromal Neoplasm in the Placenta-report of a case and review of the literature

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Introduction

Placental neoplasms involving the fetal membranes are exceptionally rare. A few cases of leiomyomas have been described, as well as endometrial stromal nodule and endometrial stromal sarcoma, but these have been individual reports. In the case of leiomyomata and endometrial stromal neoplasia, a uterine origin is also a possibility. We present a case of an incidental endometrial stromal nodule found in the decidua of the free membranes and review the literature.

Case Report

A 31 year old female with no contributory history underwent elective repeat Cesarean section at term. Examination of the placenta revealed a 448 gm placenta with a 3.7 x 2.2 x1.4 cm well circumscribed nodule embedded within the membranes(fig 1). Histology revealed a well circumscribed intradecidual nodule composed of sheets of cells with abundant eosinophilic cytoplasm, mostly polygonal, but with focal spindled areas. Rare endometrial glands were embedded(figs 2-5). The lesion stained strongly for CD10, progesterone receptor, and vimentin, and focally for CD31. Glands and trophoblasts stain for keratins, which were negative in the neoplasm. S100 nonspecifically stains a few cells. SMA, Desmin, p63, CD34 and ER were negative. The glands were thought to be either part of the neoplasm or entrapped decidual glands. The mitotic rate was brisk, about 20 per 10 high power fields, possibly reflecting the hormonal effects of pregnancy. The salient diagnostic feature of a stromal sarcoma, infiltration, was not seen. The
diagnosis rendered was stromal neoplasm, favor stromal nodule, however low grade endometrial stromal sarcoma cannot be ruled out. Fluorescent in situ hybridization (FISH) was performed to look for the characteristic t(7,17) translocation seen in many but not all endometrial stromal neoplasms, and was negative.

**Discussion**

Neoplasms within the placental membranes are exceptionally rare. A few cases of leiomyomata have been described, and the possibility of a parasitic maternal rather than fetal origin has been raised in one case (1). Rare individual reports of endometrial stromal nodule and low grade endometrial stromal sarcoma have also been described (2-3) (table 1). The finding of the occasional glands within our case may represent entrapped decidual glands, however glandular differentiation has been described in endometrial stromal neoplasms (4,5). A good review of the difficulties of establishing a diagnosis of endometrial stromal sarcoma, particularly in curettings or extrauterine sites, is available (6).

Endometrial stromal sarcoma has only been described in association with pregnancy in a few cases, where the diagnosis was made or therapy undertaken in the postpartum period (7-9). The differential diagnosis in this case includes adenosarcoma, however there was no cuffing of the benign glands by the stromal component. In spite of the brisk mitotic rate, which was also reported in Karpf’s case (3), we favored stromal nodule based on the lack of infiltration, however uterine imaging and close clinical follow-up were
suggested.

In summary, we describe a case of a stromal lesion in the decidua. We favor a benign stromal nodule, however advised close follow-up with imaging. Placental pathologists need to be aware of the spectrum of gynecologic neoplasia that might involve the placenta.
References


Legends:

Fig 1- Grossly, the lesion presented as a well-circumscribed nodule in the membranes

Fig 2-The lesion within the membranes was well circumscribed

Fig 3-The lesion appeared extensively decidualized(left), with focal myxoid changes with scattered atypical and multinucleated cells(right).

Fig 4-Higher power showing decidualized cells at the bottom, and the myxoid area with multinucleated cells at the top.

Fig 5-Focal areas were more spindled, showed rare benign glands, and the lesion showed a brisk mitotic rate(inset).
### Table 1-Reported cases of endometrial stromal tumors in the placenta

<table>
<thead>
<tr>
<th>Author</th>
<th>Diagnosis</th>
<th>Gross findings</th>
<th>Microscopic</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karpf et al(3)</td>
<td>Endometrial stromal nodule</td>
<td>5 cm nodule at the uteroplacental interface on ultrasound, in parenchyma attached to decidua at delivery</td>
<td>Non-infiltrative pushing border, CD10, PR positive.</td>
<td>Alive and well at 24 months</td>
</tr>
<tr>
<td>Katsanis et al(2)</td>
<td>Endometrial stromal sarcoma</td>
<td>8x3x1 cm mass at placental margin, and separate fragments of tumor, s/p manual removal of placenta</td>
<td>Occasional glands in decidualized tumor, infiltration of adjacent myometrium</td>
<td>After staging surgery, alive and well at 36 months</td>
</tr>
<tr>
<td>Katsanis et al(2)</td>
<td>Endometrial stromal sarcoma</td>
<td>8x3x1 cm mass at placental margin, and separate fragments of tumor, s/p manual removal of placenta</td>
<td>Occasional glands in decidualized tumor, infiltration of adjacent myometrium</td>
<td>Treated for postpartum endometritis then lost to follow-up.</td>
</tr>
<tr>
<td>Current case</td>
<td>Favor stromal nodule, can’t rule out endometrial stromal sarcoma</td>
<td>3.7 x 2.2 x1.4 cm well circumscribed nodule embedded within the membranes</td>
<td>Non-infiltrative pushing border, CD10, vimentin positive</td>
<td></td>
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