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Bizarre Stromal Cells in an Endometrial Polyp

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Precis:

Bizarre stromal cells are rare in endometrial polyps and should not be mistaken for malignancy.

Keywords: Endometrium; polyp; stromal cells, pathology

Abstract:

Bizarre stromal cells have been reported in vulvovaginal polyps, as well as in nongynecologic sites, with caution not to mistake them for malignancy. Similar atypical stromal cells have only rarely been reported in the endometrium. We present a case found incidentally in a postmenopausal female, and review the literature.

Introduction:

Bizarre stromal cells have been reported in vulvovaginal polyps, with caution not to mistake them for malignancy. This has even been termed “pseudosarcoma botryoides” by some(1). Similar atypical stromal cells have only rarely been reported in the endometrium. A case is presented and the literature reviewed.

Case Report:

The patient was a 62 year old female who underwent endometrial curettage for postmenopausal bleeding.

Pathology: Typical fragments of endometrial polyp were present in the curettage. In addition, several fragments of stroma showing bizarre nuclei with multinucleation were present. Mitoses were not appreciated(fig 1,2). Rare atypical cells stained weakly for progesterone receptor, and were negative for estrogen receptor, desmin, and smooth muscle actin.

Discussion:

Atypical stromal cells have been described in vulvovaginal fibroepithelial stromal polyps, as well as in cervix(2) where they have been termed “pseudosarcoma botryoides” by some(1). Non-gynecologic sites where atypical stromal cells have been reported include bladder, breast(3), nasal polyps(4), anal polyps(5), normal anal mucosa(6) esophagus as well as other gastrointestinal locations(7). They are of no known clinical significance, however emphasis is placed on not mistaking these cells for malignancy, and in particular rhabdomyosarcoma.

Reports of typical stromal cells in the endometrium are rare, with most reported cases seen in association with polyps(2). Tai et al reviewed 15 cases, of which 13 arose in polyps, and reported that the differential diagnoses included adenosarcoma, endometrial stromal sarcoma, and carcinosarcoma. They stressed the importance of recognition of this lesion to avoid overtreatment. In this series, the cells stained for vimentin, estrogen receptor, progesterone receptor, and androgen receptor. CD 10 and muscle markers stained less frequently(2). It was suggested that the origin of these endometrial stromal cells is a multipotential stromal stem cell that can differentiate towards either endometrial stromal or smooth muscle cells, or this finding may simply be a degenerative or reactive phenomenon(2). Dhungel et al(7) note that most cases in gastrointestinal locations have been associated with conditions of inflammation and repair, such as ischemic colitis and ulcers, supporting a degenerative or reactive origin. Groisman et al(5) suggested that the atypical stromal cells found in fibroepithelial anal polyps are of fibroblastic and myofibroblastic differentiation. Later work by this group found similar cells in normal anal mucosa, and proposed a fibroblastic origin(6).

Atypical stromal cells have also rarely been described in endometrium without polyps, as in a case seen in proliferative endometrium(3). This case stained for muscle markers. The authors emphasize the importance of recognizing the entity, as it can be particularly challenging when seen in biopsy specimens.

In summary, atypical stromal cells can rarely be seen in the endometrium, and are usually seen in polyps when present. Recognition of this phenomenon will assist in avoidance of overinterpretation of malignancy.

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Legend:

Figure 1-Endometrial polyp fragment showing numerous atypical and multinucleated cells in the stroma.

Figure 2-Higher power shows irregular nuclei and prominent multinucleation.