

Endometrial Glands in Ascites Secondary to Endometriosis

Dear Dr. Bedrossian:

Endometriosis is a quite common gynecological disease consisting of the presence of endometrial tissue that replicates outside the uterine cavity. Endometriosis generally occurs in the pelvis, most commonly near the ovaries and the dependent areas covered with peritoneum, but it may also occur at remote sites with unusual manifestations. Ectopic endometrial tissue is influenced by hormonal levels of the uterine cycle, so it flakes off with the drop of the hormonal peak as normal endometrium. This mechanism causes an inflammatory reaction in the site of interest and possible ascites in the case of peritoneal endometriosis.¹⁻³ Pathogenesis of this process determines that the material found abounds in blood, macrophages phagocytosing hemosiderin and inflammatory cells. Fine-needle cytology has been successfully used to diagnose endometriosis by demonstrating the presence of both epithelial and stromal cells in the smears.⁴⁻¹⁰ Conversely, because the vital endometrial tissue is nested in the host tissues and discharged cells are nonvital, the cytological features of the effusions due to endometriosis have been described as quite unspecific, being characterized by histiocytes phagocytosing hemosiderin, inflammatory cells, and mesothelial cells in the hemorrhagic background.¹¹⁻¹³ Endometrial cells have also been reported in these samples, but their cytological features are not specific enough to allow a definite cytological diagnosis of endometriosis, nor to exclude even a neoplastic process.¹³ In fact, possible diagnostic pitfalls in peritoneal washing in cases of endometriosis have been reported.^{13,14} In these cases, laparotomy and microscopic examination of tissue are generally requested for diagnosis.

We report a case of ascites in a patient suffering from endometriosis, in which the glandular endometrial structures were observed at the cytological examination of the effusion. This 34-yr-old patient quite suddenly developed ascites. Paracentesis was performed and 500 ml of hemorrhagic fluid was submitted for cytological examination. Papanicolaou-stained cytopins showed mesothelial cells

and histiocytes in a hemorrhagic background. Some groups of monomorphous small cells tightly attached to each other were also observed (Fig. 1); they showed small nuclei with dispersed chromatin and small nucleoli and cytoplasm was scanty and well defined in a honeycomb pattern. These groups were organized in a double layer, thinning out to a wide monolayered edge in a typical glove shape (Fig. 1). The bland microscopic features of these cells ruled out a neoplastic effusion, and moreover, these groups strongly suggested the endometrial glandular structures observed in endometrial endocyte¹⁵ as well as in fine-needle cytology of endometriosis.⁴⁻¹⁰ Therefore, peritoneal involvement by endometriosis was diagnosed. The patient underwent proper therapy without other diagnostic procedures. We report this case because the detection of endometrial glandular structure in peritoneal effusion is very unusual. Nonetheless, its detection may allow the cytological diagnosis of endometriosis in effusions, avoiding more invasive diagnostic procedures.

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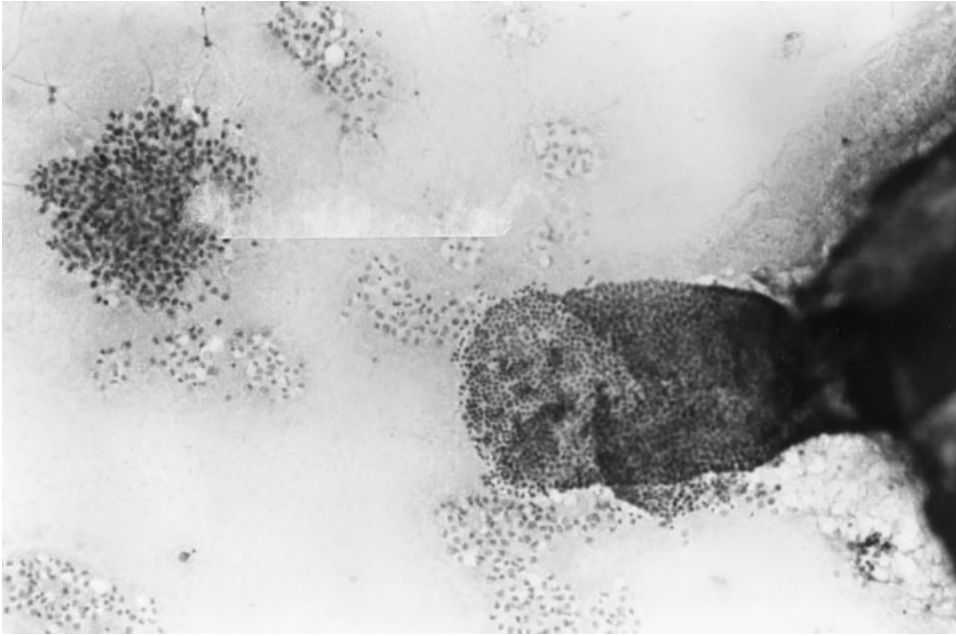


Fig. 1. A honeycombed tubular structure of endometrial cells with a monolayered edge and typical glove shape. Histiocytes and mesothelial cells are interspersed in a hematic background (Papanicolaou, $\times 106$).

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