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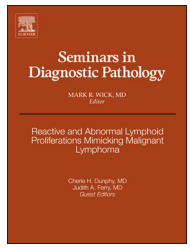

Use of immunohistochemistry in the diagnosis of miscellaneous and metastatic tumors of the uterine corpus and cervix

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ABSTRACT

Uncommon tumors in the uterus present diagnostic challenges. In some cases, the tumor subtype is usually seen outside the gynecologic tract and the possibility of a uterine primary is not considered. In other cases, histologic overlap with more common uterine tumors leads to potential misdiagnosis. Finally, metastatic carcinoma may involve the uterus and cervix. Rarely, symptoms related to the uterine metastasis may precede diagnosis of an extrauterine primary. Without the proper clinical context, the possibility of a missed diagnosis is increased. One must first be aware of these possibilities, but immunoperoxidase studies are often necessary to confirm the diagnosis. In this review, unusual and metastatic tumors involving the uterine corpus and cervix and immunoperoxidase studies used to diagnosis such tumors are discussed.

This review addresses infrequently encountered primary tumors in the uterus as well as metastatic tumors that may involve the uterus. Because tumors in this group often lack clinical and gross pathologic features distinguishing them from more common uterine tumors, they are often not considered in the working clinical diagnosis. Immunohistochemistry is an important tool in the recognition of these tumors, which is essential since their treatment and prognosis may differ from more commonly encountered tumors with which they might be mistaken.

Tumors composed of round blue cells

A variety of epithelial and non-epithelial tumors may be composed of a relatively monotonous population of cells with minimal cytoplasm including neuroendocrine tumors, primitive neuroectodermal tumors, and lymphoma. Some tumors will have architectural features that can provide a clue to diagnosis but many will require immunoperoxidase studies for definitive diagnosis. An initial screening panel that includes CD45 (for lymphoid differentiation), keratin (for epithelial differentiation), and S100 (to exclude melanoma) may narrow the differential diagnosis so that more specific stains may be assessed.

Lymphoma

Primary lymphoma arising in the female genital tract is uncommon, representing approximately 1.5% of extranodal non-Hodgkin lymphomas.[1] Most cases of lymphoma in the gynecologic tract represent secondary involvement, reported in up to 30% of lymphoma cases.[2] A lymphomatous infiltrate may be suspected when sheets of relatively monomorphic cells with few to no associated inflammatory cells infiltrate

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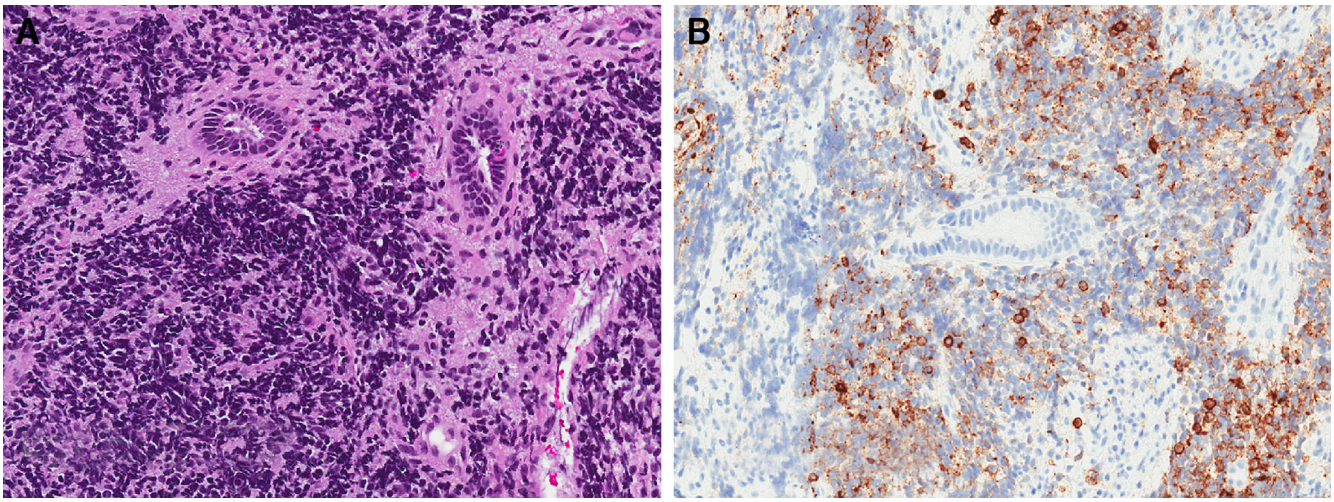

Fig. 1 – (A) Small blue cells with minimal cytoplasm infiltrate endometrial stroma surrounding and sparing endometrial glands (10×); and (B) CD45 stain highlights lymphoid nature of the cells (10×). (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

deep within the cervical stroma or myometrium. In the cervix, there is often a hypocellular zone subjacent to the cervical mucosa. In the endometrium, lymphoma expands the stroma, occasionally with a vaguely nodular pattern. In both the endocervix and endometrium, the basic microscopic architectural pattern is preserved.[2–4] Sclerosis is commonly

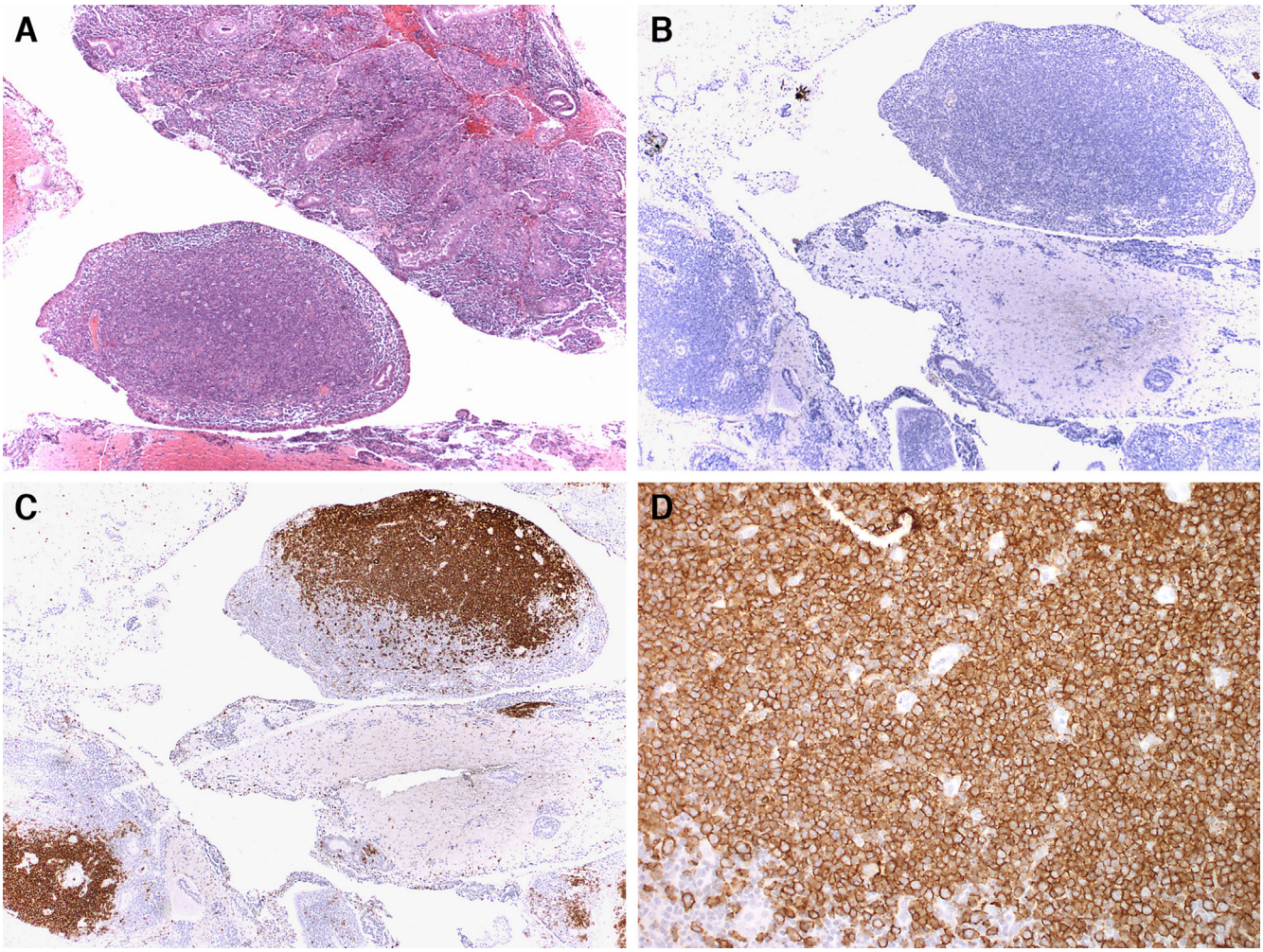

Fig. 2 – (A) Densely cellular infiltrate within the endometrial stroma (4×); (B) negative CD3 stain (4×); (C) diffusely positive CD20 stain (4×) confirming B-cell lineage; and (D) higher power of image C (20×).