

Granulocytic sarcomas: difficulties in diagnosis

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ABSTRACT

Granulocytic sarcoma is an uncommon tumor composed of myeloid blasts and/or immature myeloid cells in an extramedullary site which is usually associated with acute or chronic myeloid leukemia. The tumor may also be the initial manifestation of leukemia. The histomorphological diagnosis of granulocytic sarcoma can be challenging to pathologists, especially in the absence of a known hematological disorder. In this case, differentiation of granulocytic sarcoma from malignant lymphomas and other small round cell tumors is very critical. Seven cases of granulocytic sarcoma are reported in this paper. One patient had granulocytic sarcomas at two different sites. Hematoxylin-eosin-stained sections were reexamined. Blastic, poorly differentiated, and well differentiated histopathological variants were found in two, five and one cases, respectively. Immunohistochemical studies were performed on formalin-fixed tissue from all cases using a avidin-biotin-peroxidase complex technique. The panel included antibodies against LCA, CD43, CD34, c-kit, myeloperoxidase, CD68 KP1, CD15, and CD99. All cases stained positively with LCA, CD43, CD34, myeloperoxidase, and CD68. Five cases were positive for c-kit, three cases were positive for CD15, and two cases were positive for CD99. An immunohistochemical panel including at least myeloperoxidase, CD68 and CD34 can be used for detection of myeloid differentiation. It is also important that granulocytic sarcoma be considered in the differential diagnosis of CD99-positive round cell tumors. **Free full text available at www.tumorionline.it**

Key words: granulocytic sarcoma, differential diagnosis, myeloid markers, CD99.

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