Ovarian granulosa cell tumor metastatic to supraclavicular lymph node after 15 years of diagnosis: A case report

Sir,

Supraclavicular lymph node metastasis can originate from the head and neck primarily, and also from infracavicular sites such as breast, lung, and cervix.[1] Gastric carcinomas characteristically metastasize to the left supraclavicular lymph node, called Virchow’s node. Ovarian malignancies are an uncommon primary site for metastasis to the supraclavicular lymph nodes. We present a case of an ovarian granulosa tumor metastasizing to the left supraclavicular lymph node 15 years after initial diagnosis.

A 65-year-old woman presented with left supraclavicular lymphadenopathy for 2 months. Ultrasonography showed a well-defined heterogeneously hypoechoic lymph node in the left supraclavicular region measuring 1.8 × 1 × 1 cm. On examination a firm, mobile, 2 × 1 × 1 cm lymph node in the left supraclavicular fossa was identified. Fine-needle aspiration was performed, which showed cellular smears consisting of isolated cells and loosely cohesive syncytial aggregates of tumor cells. The cells were round to oval, showing mild nuclear pleomorphism, nuclear grooving, fine granular chromatin, inconspicuous to occasional small nucleoli at places, and scant to moderate cytoplasm with indistinct cell borders [Figure 1a]. At places the cells were arranged in a microfollicular pattern and filled with a homogenous eosinophilic globular material [Figure 1b]. On taking detailed history, the patient gave a past history of ovarian tumor 15 years earlier. The histological type was granulosa cell tumor (GCT) stage 1. The tumor was surgically resected. The cytological smears were reviewed again. The cytological characteristics, nuclear grooving, microfollicles filled with eosinophilic material (Call–Exner bodies), and inhibin positivity were consistent with metastasis of GCT of the ovary to the left supraclavicular lymph node. The patient was referred to the gynecology department followed by oncology department, where she was given platinum-based chemotherapy.

GCT is a sex cord–stromal tumor (SCST) and constitutes 1% of ovarian tumors.[2] GCT is divided into two subgroups on the basis of clinical presentation and histological features — juvenile and adult subtypes. Juvenile GCT accounts for 5% and adult GCT accounts for 95% of all GCTs. Both subtypes have low malignant potential, with a capacity to extend beyond the ovary and also to recur long after successful removal. Tumor rupture during surgery is associated with peritoneal fluid metastasis; however, no significant difference between survival rates of patients with and without tumor rupture has been documented.[2] Other prognostic factors that affect the 5-year survival rate are tumor stage, tumor mitotic rate, and residual disease.[3] Spread is largely within the pelvis and the lower abdomen. Distant metastasis is rare but has been reported at many extra-abdominal sites. There are reported cases of lung, liver, brain, bone, diaphragm, abdominal wall, and adrenal gland metastases from GCT and other SCSTs.[3][4] Supraclavicular lymph node metastasis from ovarian tumors is unusual. Literature review has shown various primary ovarian tumors metastasizing to the cervical lymph nodes majority of which are epithelial malignancies. One case of GCT metastasizing to the supraclavicular lymph node was reported by Ismi et al. in 2007.[5]

GCTs are ovarian tumors with a long natural history and low malignant potential. However, recurrence and distant metastasis are known to occur as late as after 30 years of initial diagnosis; thus, patients should be kept on a long-term follow-up protocol even if the primary tumor is occult.[7]

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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Anterior abdominal wall Rosai-Dorfman disease diagnosed by fine-needle aspiration cytology

Sir,

A 29-year-old woman presented with a gradually growing, painless, infraumbilical mass in the anterior abdominal wall. Abdominal ultrasonography showed a subcutaneous swelling with heterogeneous echotexture located above the rectus sheath. The swelling was 5 cm × 4 cm × 4 cm at presentation. There was no associated lymphadenopathy or fever. Fine-needle aspiration cytology (FNAC) of the mass showed numerous large histiocytes with voluminous eosinophilic cytoplasm containing intact lymphocytes, plasma cells, and neutrophils (emperipolesis) [Figure 1]. Some of these histiocytes were binucleate or multinucleated. The nuclei were bland with fine, evenly distributed chromatin. We made a diagnosis of extranodal Rosai-Dorfman disease. An excision biopsy was subsequently performed. Grossly, the mass was solid gray-white and measured 5 cm × 4 cm × 2.5 cm. Microscopic examination showed numerous histiocytes exhibiting emperipolesis along with dense inflammation and stromal fibrosis [Figure 2], confirming our cytology diagnosis. The histiocytes expressed S100 protein [Figure 3].

Rosai-Dorfman disease (sinus histiocytosis with massive lymphadenopathy) was described by Rosai and Dorfman in 1969.[1] However, earlier in 1947, Robb-Smith had documented it as giant cell reticulosis in children. It is an idiopathic, nonneoplastic proliferative disorder of histiocytes with concomitant extranodal involvement in approximately one-third of cases. Nodal Rosai-Dorfman disease commonly presents as painless massive bilateral cervical lymphadenopathy, frequently associated with fever, leukocytosis, elevated erythrocyte sedimentation rate (ESR), and hypergammaglobulinemia. Isolated extranodal manifestation is relatively rare, often lacks constitutional symptoms, and has been reported in the orbit, paranasal sinuses, skin, meninges, thyroid, bone, and salivary glands.[2] The disease has not been documented in the abdominal wall so far.

The disease is commonly observed in the first and second decades of life, with a slight male predilection. Isolated extranodal forms tend to occur at an older age. The etiology of the disease remains unknown. It is attributed to either immunological dysfunction or infectious agents that result in macrophage proliferation stimulated by growth factors. The disease may be self-limiting or may require surgical intervention based on size and symptoms. Both nodal and extranodal Rosai-Dorfman disease exhibit similar morphology on FNAC.[3,4]

How to cite this article: Puri S, Mohindroo N, Mohindroo S, Sharma S. Ovarian granulosa cell tumor metastatic to supraclavicular lymph node after 15 years of diagnosis: A case report. J Cytol 2015;32:213-4.

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