



SEROUS OVARIAN CARCINOMA INITIALLY PRESENTING WITH VIRCHOW'S NODE METASTASIS: A CASE REPORT

Pathology

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ABSTRACT

Tumoral dissemination of ovarian cancers most commonly occurs through the intraperitoneal route, but rarely ovarian cancer also metastasizes through lymphatic channels. Pelvic and retroperitoneal lymph node metastasis is usually involved. Ovarian primaries of supraclavicular metastasis are extremely rare, hence presenting this case.

KEYWORDS

serous carcinoma ovary, virchow's node

INTRODUCTION

Among gynecological malignancies, ovarian cancer has the highest mortality rate. This happens because ovarian malignancies usually present at an advanced stage of the disease. Ovarian cancer usually remains confined to the peritoneal cavity as the dissemination of ovarian cancers most commonly occurs by the intraperitoneal route. Ovarian cancer also metastasizes through lymphatic channels and the hematogenous route to retroperitoneal and extraperitoneal lymph nodes and other distant sites including lungs and bones.

Case Study

We here describe a case of a 63-year-old female who had complaints of left supraclavicular lymph node enlargement. FNAC was performed, and metastasis to lymph node by adenocarcinoma was given (FIG.1). CA-125 of the patient was found elevated. CT abdomen with chest and neck screening was done, which revealed features suggestive of ovarian carcinoma with abdominal nodes, supraclavicular lymph node metastasis, and omental deposits. The patient underwent an excision biopsy of the supraclavicular fossa lymph node.

Macroscopically, we received two grey white nodular masses largest measuring 1.5x1x1cm, the smallest measuring 0.5x0.5x 0.5 cm. Cut section of both grey white Histopathology of the section from the lymph node shows complete effacement of architecture and a neoplasm composed of cells arranged in papillary pattern with central fibrovascular core. Individual cells lining the papillae are cuboidal to columnar with scant to moderate eosinophilic cytoplasm, irregular nuclear membrane, clumped chromatin, and inconspicuous nucleoli. Stroma is desmoplastic with dense inflammatory cell infiltrates composed of lymphocytes and plasma cells. Areas of necrosis were seen. Mitosis 13-14 per 10 High power field. (FIG 2 and 3)

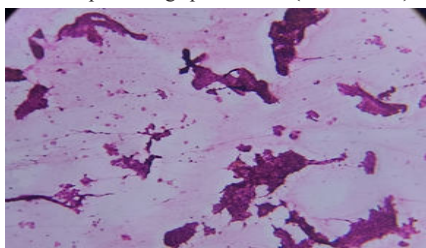


FIG 1: FNAC

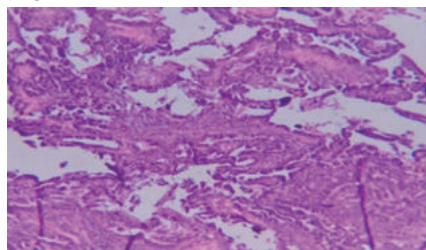


FIG 2: Microscopy Showing Papillary Architecture

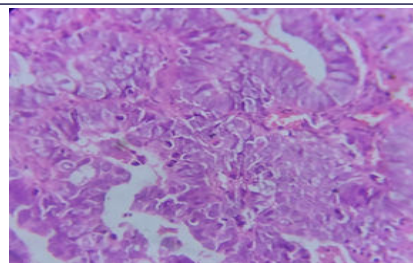


FIG 3: Higher Power showing Marked Variability in Nuclear Size and Numerous Mitotic Figures

Immunohistochemistry

PAX 8- Positive (FIG 4)

WT1 – Strongly positive (FIG 5)

CK7 -Positive (FIG 6)

CK 20 – Negative

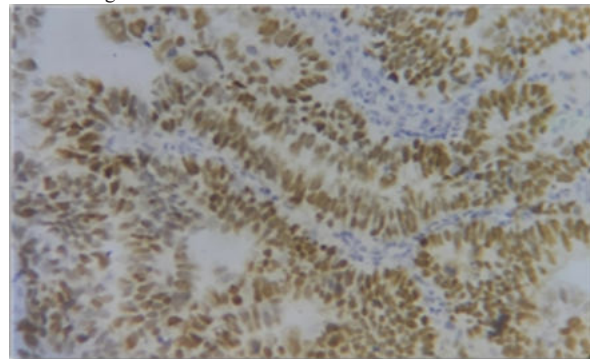


FIG 4: PAX 8 Positive

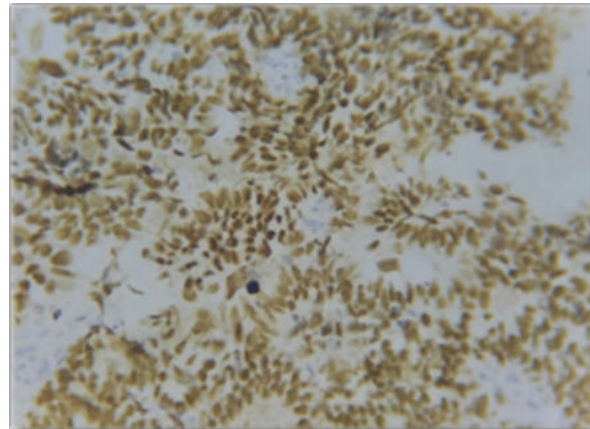


FIG 5: WT1 Strongly Positive

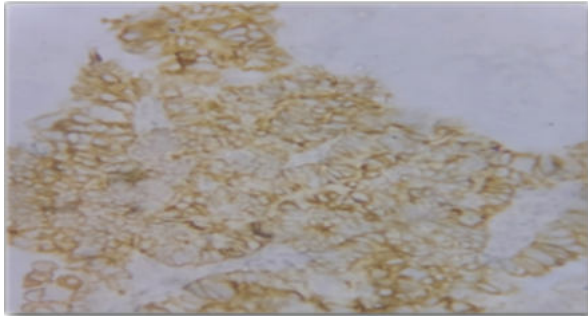


FIG 6: CK7 Positive

A diagnosis consistent with metastasis to lymph node by High-grade Serous carcinoma was given.

DISCUSSIONS

High-grade Serous carcinoma is a high-grade epithelial neoplasm demonstrating Serous differentiation. These tumors typically exhibit solid, papillary glandular, or cribriform architecture. Nuclei are large markedly atypical (nuclear size variability of > 3 -fold), with high mitotic activity, typically more than 12 mitosis per 10 HPF. An enlarged left supraclavicular node is a classical precursor to the diagnosis of metastatic cancer. It is rarely found in ovarian cancer. In cases presenting with lymphadenopathies, tumors can be diagnosed by histopathological examination, if the primary focus could not be detected by simple radiological examination. Excision biopsy of the enlarged lymph nodes can be a diagnostic approach for uncertain imaging results and is necessary for oncological treatment procedures. Metastatic lymph nodes usually present as a palpable mass but can be found by physical examination or imaging studies of patients by investigating various symptoms.

In patients with advanced ovarian cancer, lymphadenectomy is significantly associated with a better survival outcome, but it is positive effect diminishes as residual tumor size increases. High levels of WT1 expression correlated with aggressive clinical features in ovarian cancer.

CONCLUSIONS

The standard treatment of ovarian cancer is surgical staging and maximal cytoreduction with adjuvant platinum-based chemotherapy. In patients with Stage III to IV disease, whose tumor is too large to be treated surgically, neoadjuvant chemotherapy may be considered as primary treatment. When a patient presents with a distant metastatic lymph node, it is crucial to locate the primary tumor and begin active treatment.

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