CYTOMORPHOLOGIC & IMMUNOCYTOCHEMICAL DIAGNOSIS OF SMALL CELL CARCINOMA OF THE OVARY

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Clinical & Radiological Features

• A 46-year-old female presented with pain in the upper abdomen and backache for 3 months.
• Abdominal ultrasound showed masses in bilateral adnexa with mixed echogenicity.
• There were multiple enlarged, hypoechoic peripancreatic lymph nodes.

Cytology

• USG guided fine needle aspiration (FNA) was performed from the right adnexal mass and the largest peripancreatic lymph node.
• Smears were moderately cellular and predominantly showed few loose clusters and singly scattered tumor cells with high nucleus/cytoplasmic ratio, round nuclei, stippled chromatin, inconspicuous nucleoli and scant amount of cytoplasm.
• Numerous apoptotic bodies were noted along with brisk mitosis.
• There were no lymphoglandular bodies in the background of the ovarian aspirate.
• On performing immunocytochemistry on cell blocks, the tumour cells were strongly positive for CD56 and synaptophysin and were negative for vimentin, WT1 and TTF1 along with retained expression of INI1. KI67 index was nearly 100%.
• Based on the cytomorphic and immunocytochemical features, a diagnosis of small cell carcinoma of ovary, pulmonary type with metastasis to the peripancreatic lymph node was rendered.

Discussion

• SCCO is an exceedingly rare malignancy with uncertain histogenesis. SCCOHT is relatively more common than SCCOPT.
• SCCOPT occurs in perimenopausal women, is usually bilateral & not a/w hypercalcemia. SCCOHT is often regarded as malignant rhabdoid tumor of ovary.
• Vimentin & chromogranin have been found to be important in distinguishing b/w these types.
• Till date, no report elucidating cytological diagnosis of SCCO is available in the literature.

Conclusion

The present case describes the characteristic cytologic and immunocytochemical features of a rare ovarian malignancy, highlighting the diagnostic expediency of FNAC in establishing such challenging diagnoses.

References: