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Two cases of ovarian carcinoma with endobronchial metastases: Rare presentation

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Dear Editor,

Endobronchial metastasis from non-pulmonary cancers is uncommon, ranging between 2% and 5% of cancer patients based from the report from a large autopsy series. Kidney, breast, colorectal, and head and neck neoplasms are the tumors most frequently associated with endobronchial metastasis. Endobronchial metastasis of ovarian cancer is extremely rare. In this report, we present two case of carcinoma ovary with endobronchial metastasis.

A 62-year-old female patient was diagnosed with carcinoma ovary in 1992. She initially underwent surgery followed by six cycles of cyclophosphamide/carboplatin based chemotherapy. In November 2013, she presented with difficulty in breathing and cough. Bronchoscopy showed a mass in left main bronchus and right lower lobe bronchi form which biopsy was taken, suggestive of metastatic adenocarcinoma of ovarian origin [Figure 1]. On immunohistochemistry (IHC), the tumor cells expressed cytokeratin (CK) CK7, Wilms tumor 1 (WT1), CA125 and paired box (Pax) Pax2/Pax8 [Figure 2], negative for CK20, thyroid transcription factor 1 (TTF-1) and napsin, confirming it to be of ovarian origin.

She was started on chemotherapy with gemcitabine and carboplatin based regime. She is responding well with significant improvement in symptoms.

A 53-year-old female patient diagnosed as a case of adenocarcinoma right ovary in June 2007. She underwent optimal cytoreductive surgery then treated with chemotherapy.

She presented with difficulty in breathing and cough in October 2013. Bronchoscopy showed a mass at carina, which was cauterized. Histopathology was consistent with metastasis of a high grade serous carcinoma. She responded with significant improvement in symptoms initially, but succumbed to her illness later on after 1.5 months.

Carcinoma ovary is a highly fatal disease with 5 years survival of stage IIIC being 20%. However in the last few years, with the advent of new chemotherapeutic drugs, the natural history of ovarian cancer is changing and unusual sites of metastasis are being reported.

The usual mode of dissemination of carcinoma ovary is transcelomic followed by hematogenous. Among visceral sites lung is the most common site of metastases.[1] Pulmonary involvement by ovarian carcinoma is usually manifested in the form of pleural effusion. Intraparenchymal nodules or mediastinal lymphadenopathy is usually not associated with carcinoma ovary. Endobronchial lesions are usually associated with second primary lung cancer. Until date, to the best of our knowledge, only seven cases of endobronchial metastasis have been reported.[2-5] Furthermore even as patients are living longer, secondary cancers also may develop in the same patient. Hence, it is very prudent to biopsy unusual sites of metastases so as to understand the disease pattern and provide the best treatment to patients.

To differentiate second primary carcinoma lung from carcinoma ovary a variety of IHC markers are used. For confirmation of ovarian origin, PAX8 and WT1 had comparable overall detection rates and the combination of both markers substantially improved the detection rate.[6] On the other hand, double napsin A and TTF-1-positive immunostaining is highly specific for lung primary adenocarcinoma and the combination of these two biomarkers is warranted to help segregating primary lung adenocarcinoma from metastasis.[7]

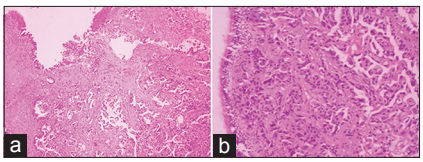

Figure 1: Section showing respiratory epithelium lined tissue with subepithelium infiltrated by an adenocarcinoma arranged in tubulo-acinar and micropapillary pattern (a) H and E, ×100, (b) H and E, ×200

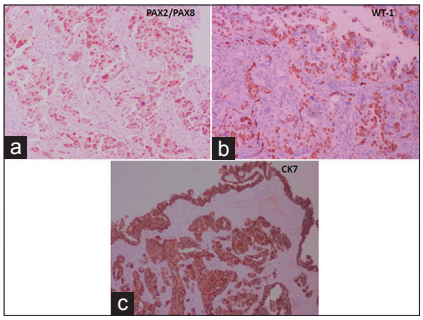

Figure 2: (a) Immunostains for paired box (Pax) Pax2/Pax8 show nuclear positivity in the tumor cells (diaminobenzidine [DAB], ×100) (b) Immunostains for Wilms tumor 1 show nuclear positivity in the tumor cells (DAB, ×100) (c) Immunostains for cytokeratin showing cytoplasmic and membranous positivity in the tumor as well as in the lining endobronchial epithelium (DAB, ×100)

There is no standard treatment of endobronchil metastasis.

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Conflicts of interest

There are no conflicts of interest.

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