A Fatal Case of Giant Cell Pulmonary Sarcomatoid Carcinoma Diagnosed in a Pregnant Woman: A A Case Report

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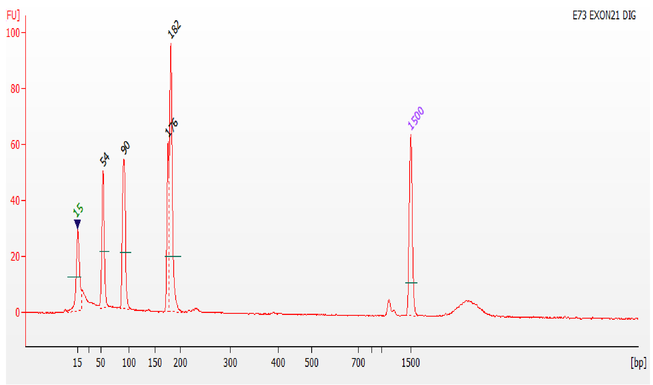
Introduction

Cancer during pregnancy is rare, complicating only 0.02-0.1% of all pregnancies. The most common types of cancer are breast and cervical cancer, lymphoma, melanoma and leukemia. The association of lung cancer and pregnancy has rarely been described. Few more than 40 cases have been reported in the literature, 77% were non-small cell carcinoma (NSCLC) and most of them were adenocarcinoma. Usually patients are diagnosed with advanced disease during the second or third trimester of pregnancy.

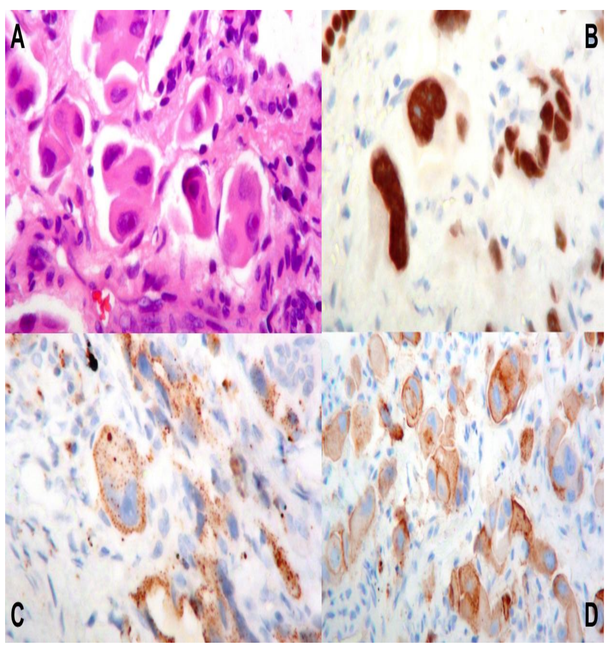
We describe a case of a 24-year-old woman, who was admitted to the hospital at 22 weeks of pregnancy, with fever, cough and dyspnea leading to respiratory failure who was diagnosed with pulmonary giant cell carcinoma. These tumors represent 0.1 – 0.4% of lung cancer.

Methods

We reviewed the clinical history data.



Mutation in Exon 21. Microfluidic Electrophoresis Assays



A. Giant cell carcinoma (H & E)
B. Gen TTF-1 nuclear expression (IHC)
C. Napsin A granular cytoplasmic expression (IHC)
D. Carcinoembryonic antigen cytoplasmic expression (IHC)

Case description

A 24-year-old pregnant woman was admitted to the hospital at 22 weeks of gestation with a history of malaise, fatigue, exertional dyspnea, dry cough and fever since 5 months ago, without a pathological history. Initially, she had a diagnosis of pneumonia and antibiotic treatment without improvement, so she was referred to our hospital.

She was admitted with hypertension, tachycardia, desaturation, severe dyspnea, lung auscultation revealed reduction of breath sounds, no murmurs, no edema in the lower extremities and a single live fetus. Chest X-ray showed bilateral infiltrates and pleural effusion. Respiratory support was required quickly and then vasoactive support. She became hemodynamically unstable, therefore we decided to end pregnancy.

We ruled out HIV, influenza, hepatitis, cytomegalovirus and the immunological profile was normal.

FBO with BAL was performed with direct examination; cultures were negative, PCR for TB was negative, and cytology had cells suggestive of malignancy. Later, she underwent a thoracoscopy and biopsy. She showed progressive deterioration, so we started ECMO support until we received the pathology report with **(NSCLC) Giant Cell Sarcomatoid Variety.** She developed refractory hypoxemia with bilateral involvement of the four quadrants, then the support was suspended, afterwards she died.

Discussion

The giant cell tumor is an aggressive rare histological variant, which represents 0.1 to 0.4% of lung tumors. It is characterized by giant, anaplastic and pleomorphic cells, which form chains or cords infiltrating the stroma. In our case we observed lymphocyte emperipolesis by malignant giant cells and profuse vascular invasion. Immunohistochemistry showed TTF1 and Napsin A, confirming their lung origin, also strong expression of cytokeratin CKAE1 / AE3, CK7, EMA and Vimentin. Finally the proliferation index Ki-67 was 80% in neoplastic cells. The protein kinase expression of EML4-ALK gene was negative and the EGFR mutation was positive for Exon 21.

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