Case Report
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Pulmonary Sarcomatoid Carcinoma

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Abstract

Pulmonary Sarcomatoid Carcinoma (PSC) is a poorly differentiated NSCLC with sarcoma like differentiation (spindle/giant cell) or a component of sarcoma (malignant bone/cartilage/skeletal muscle)[1,5]. WHO grading 2015, classifies sarcomatoid ca into five histological types: pleomorphic carcinoma, spindle cell carcinoma, giant cell carcinoma, carcinosarcoma and pulmonary blastoma.

Keywords: Elderly, Lung, Malignancy, Prognosis

1. Introduction

PSC is a rare carcinoma accounting for 0.1 to 0.4%[1] of all lung malignancies. It is a rare histological subtype of NSCLC usually affecting the elderly males[8] and is associated with heavy smoking[1]. There is no classical presentation of the patient. The patient may present with cough, hemoptysis, dyspnea without any other significant complaint. Here, we describe a case of PSC in a 70 year old male.

2. Case Report

A 70 yr old male patient, a known case of hypertension, diabetes and a chronic smoker for past 30 years presented to the hospital with dry cough, associated with chest pain mostly felt on the left side of the chest, and progressive breathlessness since last two weeks. However, the patient denied any history of orthopnea, Paroxysmal Nocturnal Dyspnea, weight loss, fever, hemoptysis, hematuria, and oliguria. Patient was treated with antibiotics and cough suppressants. Routine investigations were all normal. Chest X-Ray showed mild to moderate pleural effusion on left side. Ultrasonography guided pleural tap was done to relieve the patient of his symptoms. Pleural fluid analysis showed abnormal microbiology features suggesting metastatic carcinoma. Cytopathology report showed occasional mesothelial cells in hemorrhagic background. CT chest/abdomen revealed a parenchymal nodule in the left upper lobe at the pleura parenchymal interface with left pleural effusion. PET SCAN showed left pleural effusion causing complete collapse of the underlying lung parenchyma with no uptake in any other organ. HPE-biopsy from left pleura showed lung parenchyma and fibrocollagenous tissue possibly pleural tissue infiltrated by tumor cells, which were positive for pancytokeratin, while negative for P40, Calretinin, TTF-1 suggesting possibility of NSCLC, sarcomatoid type. On the basis of the above report a final diagnosis of PSC was made. The patient was planned for palliative chemotherapy with paclitaxel and cisplatin. However, the patient deteriorated over the next few days and died.

3. Discussion

Sarcomatoid carcinoma can occur throughout the body. However, PSC is a rare entity. The mean age at diagnosis is 65 years[8] with a predilection for male sex and is associated with heavy smoking[1]. Our patient was an elderly male aged 70 years. PSC can arise centrally or peripherally[5] but most commonly arises as a

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solitary peripheral mass with a predilection for upper lobe similar to other smoking related NSCLC. There is no specific presentation of the disease. Our patient presented with dry cough, and dyspnea which progressed because of massive pleural effusion followed by rapid deterioration of the patient clinically, with visible weight loss over next 4 to 6 weeks. The lesion on CT scan measured about 1.38 cm x 1.19cm in the upper lobe at the pleuro pulmonary interface. This tumor is usually locally advanced at the time of diagnosis.[1] The epithelial lineage of the spindle and giant cell components of pleomorphic carcinoma can often be demonstrated. AE1/3, CAM 5.2, CK18, and CK7 are positive[3] more frequently than epithelial membrane antigen, carcinoembryonic antigen (CEA), CD15, and Ber-EP4.[5] Positive epithelial markers are not required for diagnosis if components of adenocarcinoma, squamous cell carcinoma, or large cell carcinoma are present. Over expression of EGFR[6] (a tyrosine kinase receptor) has been seen in almost all cases and suggested as the etiology. For localized disease surgery is adequate for treatment while for metastatic disease platinum based chemotherapy is advised. The disease however has poor survival rate.[2]

4. Conclusion

PSC is a very rare histological subtype of NSCLC. Survival rate following surgical resection is limited to 5 years in 20% of the cases while death may occur within months without resection suggesting its highly aggressive nature.[2,4] Because of resistance to chemotherapeutic agents,[7] the disease has worse prognosis.

5. References

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