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Case report

Sarcomatoid Malignant Pleural Mesothelioma: A Case Report

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Mesothelioma is a rare neoplasm with an incidence of approximately 1 case per million per year. It primarily affects individuals over the age of 60. The main risk factor for this condition is asbestos exposure, although other factors such as Simian virus 40, ERIONITE fiber exposure, and radiation-induced factors can also contribute. This case report presents the diagnosis of a 70-year-old female with Sarcomatoid-type Mesothelioma using IHC markers.

Introduction

Mesothelioma is an uncommon entity and accounts for 5-25% of all malignancies of pleura but 1% of total lung cancer. RISK FACTORS INCLUDE: 1. ASBESTOS Exposure 2. simian virus 40 3. ERIONITE fibre exposure 4. RADIATION INDUCED and HISTOLOGY are- 1. epithelial (60%) 2. Mixed (25%) 3. Sarcomatoid (15%) The symptoms commonly include chest pain, shortness of breath resulting from effusion. patients with asbestos- related mesothelioma have increased in numbers over the last few decades [1,2]. This disease has poor prognosis and need early diagnosis and treatment.

Case Report

A 70-year-old female was admitted to ATRCTRI, BIKANER for a shortness of breath and chest pain for first time. Patient had a history of cough and chest pain for last 6months. All her routine investigations were done. X ray showed a localised shadow in right lung caused by presence of pleural fluid in the pleural cavity. Following it a pleural tap was done and haemorrhagic fluid around 300ml was tapped. Fluid for tuberculosis was negative. USG THORAX reported Right lower lobe consolidation. CT THORAX revealed a well-defined pleural based lesion in Rt lower lobe, approx. size 159*109*117mm (Figure 1).

Figure 1. CECT Chest Showing Thickening at Left Side Pleura with Involvement of Lung.

A trucut biopsy+ IHC from pleural mass revealed positivity for CK (Epithelial marker) D240(mesothelioma marker). It confirmed the diagnosis of PLEURAL MESOTHELIOMA OF SARCOMATOID TYPE. Patient was initially consulted for surgical opinion but patient refused for surgery and then was taken on palliative chemoradiotherapy. Initially underwent 4 cycles of premetrexate + carboplatin and then shifted to palliative chemotherapy i.e., MITOMYCIN, VINBLASTIN, CISPLATIN.

Discussion

MPM is a notorious pleural malignancy with a sombre prognosis and is locally invasive tumour, spreads along pleura, lung, diaphragm, and mediastinum. CECT chest being the main modality of imaging. Definitive diagnosis is based on histological and IHC confirmation. positive markers available are calretinin, cytokeratin5/6, WT1. Association with asbestos exposure was first reported by Wagner et al [1]. After exposure to asbestos mean time to develop of MPM is about 30-40 years, The prognosis is poor. The median survival time without treatment is approx. 7 to 8 months. Usually, patient present initially with chest pain that is due to pleural infiltration of tumour and may also present with dyspnoea due to pleural effusion. About 80% of the cases appear in OPD with pleural effusion. Mesothelioma is granular tumour arises from parietal pleura. This tumour mainly infiltrates locally into the chest wall but distant metastasis is less common [3]. Chest pain seen in MPM mainly due to locally infiltration of tumour. The chest pain in our patient might be due to intercostal nerve entrapment by the tumour arose from parietal pleura. Patients with severe pain are referred to pain clinics by other hospitals and malignant cases are reported at that time [4]. Pleural effusion cytology positivity rated is approx. 26% [5], and the positive rate is comparatively lower in the sarcomatoid subtype than epithelioid type [6]. The rates of diagnosis by blind percutaneous pleural biopsy and CT-guided pleural biopsy were reported 31% [7] and 80% [8], respectively. In our case we did CT based tru-cut biopsy and diagnosis made with IHC markers.

The accuracy in diagnosis done by PET-CT is high and favourable. Flores et al. [9] showed that stage 1a (early cancer) hard to detected by PET, and false-negative cases can be seen [10]. Treatment for MPM is surgery followed by chemoradiotherapy (premetrexate 400 mg/ m2 + carboplatin AUC 5) to prevent local recurrence. Unresectable MPM can be treated with NIVOLUMAB (immune check point inhibitor) with objective response rate (ORR), 29.4%; 2-year overall survival rate, 35.3%] [11].

To conclude we report rare case that presented in our OPD. For that we planned for surgery but due to denial of patient, chemoradiotherapy was given but due to disease progression palliative approach taken and palliative chemotherapy was started.

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