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PLEURAL MESOTHELIOMA – RARE PRESENTATION

Medicine

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ABSTRACT

Pleural Mesothelioma is a rare neoplasm. Main risk factor is asbestos exposure. Most commonly reported symptoms include dyspnea resulting from pleural effusion and pain in the chest. 45-year-old male presented with complains of cough, dyspnea and chest pain for three weeks. No h/o smoking or exposure to asbestosis. Chest x-ray showed a shadow in the right chest caused by presence of fluid in the pleural cavity. Chest CT showed diffused homogenously enhancing plaques with pleural thickening in mass formation in entire coastal and mediastinal pleura of right hemi thorax. Then patient underwent thoracoscopy and biopsies were sampled. By microscopic imaging and immunohistochemistry, we could diagnose malignant pleural mesothelioma. Pleural Mesothelioma without asbestos and radiation exposure is rare case presentation

KEYWORDS:

Dyspnea, Pleural Effusion, Pleural Thickening.

INTRODUCTION:

Malignant mesothelioma is an entity that presents with many diagnostic and treatment challenges. The most commonly affected site is pleura, although mesothelioma can also affect other serosal surfaces1. Mesothelioma is a rare neoplasm, found in approx. 1 case/ million/year. It develops mainly in individuals over 60, men mostly2 Pleural Mesothelioma is a rare neoplasm. Approximately 70 percent of mesothelioma cases are associated with asbestos exposure2. The incidence of mesothelioma in people exposed to asbestos is 300 times higher than in the general population[2].

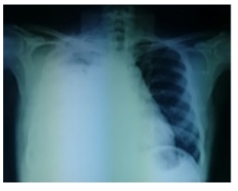
Pleural mesothelioma without history of asbestos or ionizing radiation exposure is rare case presentation

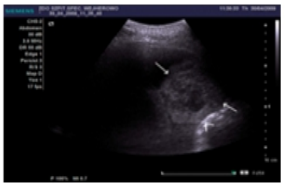
CASE REPORT:

45-year-old male was brought to medicine OPD with complains of cough, dyspnea and chest pain for three weeks. No h/o smoking or exposure to asbestosis or exposure to radiation. Patient had no known allergies. He was an agronomist. On physical examination, patient was of thin built, blood pressure was 130/80 mm Hg, Pulse rate 92/min, respiratory rate of 28/min.The findings from head, eyes, ears, nose and throat examination were unremarkable. Examination didn't reveal any clubbing, cyanosis. On respiratory system examination, trachea was pushed towards left, and he had decreased chest wall movements and decreased breath sounds on right side of chest. Other system examinations were within normal limit.

Chest x-ray showed a shadow in the right chest caused by presence of fluid in the pleural cavity. Thoracocentesis was done and bloody fluid was obtained. Analysis showed 40% mesothelial cells and no neoplastic cells were found. Fluid culture for tuberculosis and microbial cultures were negative.

USG thorax showed effusion in pleural cavity and thickened pleura. Chest CT showed diffused homogenously enchancing plaques with pleural thickening in mass formation in entire coastal and mediastinal pleura of right hemi thorax. Then patient underwent thoracoscopy and biopsies were sampled. By microscopic imaging and immunohistochemistry we could diagnose malignant pleural mesothelioma.





DISCUSSION:

Pleural mesothelioma is rare neoplasm. Mesothelial cells of serous pleura are cell of origin of pleural mesothelioma. It's a very aggressive tumor with median survival is about 1 year. Pleural mesothelioma is more commonly seen in males and predominantly seen in 5th to 6th decade1. Main risk factor is exposure to asbestos and Other risk factor includes exposure to ionizing radiation. There is long latency period between asbestos exposure and development of pleural mesothelioma, around 20 – 30 years2. Cigarette smoking has not been shown to increase the risk of mesothelioma.

Most commonly reported symptoms include dyspnea, cough and chest pain. General manifestations of malignancies like weight loss are seen in advanced stages. Most common clinical presentation is recurrent pleural effusion3. Our patient presented with dyspnea.

Computed tomography plays an important role, both in the diagnostics and in the evaluation of treatment response in mesothelioma. The most common findings of mesothelioma on CT are: pleural thickening, including pleura in interlobar fissures, effusion in the pleural cavity, decreased volume of the affected side of the chest, mediastinum shifted to the healthy side, and pleural calcifications[2].

Cytology of pleural fluid is not contributive towards diagnosis of pleural mesothelioma. Thoracoscopy has high sensitivity in diagnosis5. Chemotherapy, radiotherapy and surgical resections are the treatment modalities available. American cancer society guidelines emphasis the usage of cisplatin, gemcitabine for chemotheraphy[4].

CONCLUSION:

Pleural mesothelioma is very rare and aggressive neoplasm with poor prognosis. The mortality is almost 100%. In cases with very early diagnosis, recovery has been reported. In cases with pleural effusion with pleural thickening, pleural mesothelioma should be one the condition to be ruled out even there is no asbestos or radiation exposure.

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