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IP Journal of Diagnostic Pathology and Oncology

Journal homepage: https://www.jdpo.org/

Case Report

Case report of malignant mesothelioma

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Abstract

Background: Pleural mesothelioma could be a exceptionally uncommon and aggressive neoplasm. Most commonly related with farther (up to 40 a long time earlier) asbestos introduction. It is troublesome to analyse and the forecast is ominous.
Case Report: We presented a case of a female with dyspnoea, cough and hemoptysis. Her chest radiogram showed hydrothorax on the left side. Neither the cytology examinations of the pleural liquid, nor the CT guided fine needle biopsy established the diagnosis. CT scan showed features suggestive of pleural mesothelioma. Ultrasonography of abdomen showed a large liver nodule. The diagnosis was confirmed by liver nodule biopsy and positive immune-histochemical markers, it was CK7 positive and calretinin positive (mesothelial origin marker).
Conclusions: Diagnostics of pleural mesothelioma is exceptionallytroublesome. CT and biopsy with immune-histochemical markers appear to be exceptionally important symptomatic strategies. It is worth recalling that pleural mesothelioma can have a nearby shape which may change into a diffuse one.

Keywords: Malignant mesothelioma, Aggressive neoplasm, Immuno-histochemistry.

Received: 16-11-2024; **Accepted:** 01-02-2025; **Available Online**: 01-05-2025

1. Introduction

Mesothelioma may be a uncommon and aggressive neoplasm, found in approx. 1 case/ million/year. It creates primarily in elderly people over 60, men generally, but can influences children. The rate of mesothelioma is commonly related with inaccessible (up to 40 a long time earlier) asbestos introduction. Other hazard variables incorporate erionite, radiotherapy for other cancers and other surgeries causing pleural scarring. The foremost common symptoms include shortness of breath coming about from pleural emanation and torment within the-chest. Demonstrative imaging includes: standard X-rays, CT, MRI, and PET. The leading strategy for a last determination is video-thoracoscopy. Immuno-histochemistry can offer assistance in diagnosis. Treatment of mesothelioma incorporates chemotherapy, radiotherapy and surgical resections. The mortality is nearly 100% because it is forceful in nature and there's no authoritative remedy for mesothelioma. Recuperation has been uncommon as it were in cases of an awfully early determination, subjected to adjuvant treatment.

2. Case Presentation

A female, 54 years old, admitted at community health centre, bichun for a dry cough with hemoptysis and dyspnoea on effort, present for the last 2 weeks. She was not exposed to asbestos as per history. An X-ray showed a shadow in the left chest caused by the presence of fluid in the pleural cavity. On worsening of condition, she was admitted in a private hospital of jaipur. A decompressing puncture of the left pleural cavity was performed, and a bloody fluid was obtained. Fluid cultures for tuberculosis and microbiological cultures were negative. No neoplastic cells were found in cytological examinations of the fluid. Bronchoscopy was normal. Chest CECT was performed. It revealed diffuse nodular mediastinal, costal and diaphragmatic pleural thickening in left hemithorax, maximum thickness upto 8.1 mm. A significant amount of fluid in the left pleural cavity with

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http://doi.org/10.18231/j.jdpo.2025.009

complete collapse of left lower lobe and partial collapse of left upper lobe, mild contralateral tracheo-mediastinal shift (**Figure 1**). Few enlarged right supraclavicular, level IV cervical lymph nodes seen, largest of 15*14 mm. Multiple enlarged necrotic lymph nodes including hilar lymph nodes seen. Few small nodular lesions scattered in both lungs largest 2.3 * 3.5 cm. Most of the nodules are necrotic.

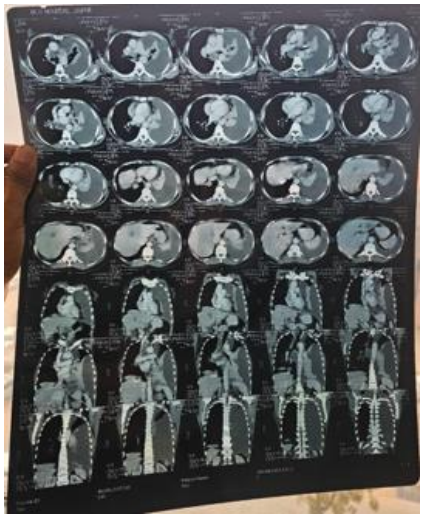

Figure 1: Chest CECT

USG of the chest was performed. It showed effusion in the pleural cavity and a poorly vascularised, hyper- echogenic mass lesion between the layers of the thickened pleura. A large nodule was seen in liver of size 3.3 *2.8 cm. Within the tumour, there were hypo- and anechoic areas suggestive of haemorrhage.

CT-guided FNAB was performed twice. There were no neoplastic cells found on cytology. This is where she underwent trans pleural thoracoscopy that revealed a supra diaphragmatic tumour with a bleeding surface, located in the pleural cavity, and multiple mass lesions of the pleura. USG guided Biopsies were sampled from liver nodule. With a microscopic image and immunohistochemistry, we could diagnose that minor nodulous pleural thickenings and liver nodule as mesothelioma. It was ck 7 positive and calretinin positive, which is a mesothelial origin marker. Sample material from the supra diaphragmatic tumour showed a hyalinised tissue with haemorrhage, containing no neoplastic cells.

3. Discussion

Computed tomography plays an critical part, both within the diagnostics and within the evaluation of treatment reaction in mesothelioma.[1] The foremost common side effects of mesothelioma found on CT are: pleural thickening, counting pleura in inter-lobar crevices, emission within the pleural depression, diminished volume of the influenced-side of the chest, mediastinum moved to the solid-side, and pleural calcifications.[2]

Other indications that can be suggestive of the malady incorporate: nodular thickening of the pleura, pleural thickening of over 1 cm, and invasion-of the mediastinal pleura.[3]

The CT picture gotten from the over displayed-quiet was suggestive of a diffuse mesothelioma right from the starting. A expansive mass between the pleural layers seem display a essentially restricted-frame of mesothelioma, while the little pleural tumours may well be characteristic of neoplastic dispersal. Limited mesothelioma could be exceptionally uncommon form of tumour. It shows-itself as a well-delineated tumour, without large scale- or tiny highlights of diffuse pleural invasion. In some cases, it is went with by the nearness of pleural emission. Limited mesothelioma may be a tumour that can reach indeed 10 cm in distance across. It is pedunculate or borders the visceral or the parietal pleura on a wide base. Infinitesimally, it is conceivable to distinguish the same sorts, as in case of diffuse mesothelioma â epithelioid, sarcomatous, and blended. In histochemical and immunohistochemical examinations, the restricted-shapes display as the diffuse ones.[4] Agreeing to a few creators, the limited tumour is the primaryorganize of the malady, taken after by the diffuse frame.[5] In spite of the truth that the fabric-examined thoracoscopically from the supra-diaphragmatic tumour appeared as it were the hyalinised tissue, without neoplastic cells, we may accept that the tumour was basically restricted, and after that subjected to hyalinisation.

The detailed case outlines very common symptomatic challenges found in mesothelioma. No cytological examinations of the pleural emanation-appeared the nearness of neoplastic cells. They are found in as it were approx. 50% of patients with pleural radiation created within the course of mesothelioma.[4] Rehashed FNAB did not uncover the conclusion either, in spite of its common utilize in mesothelioma diagnostics. This is often since it was the difficult, hyalinised, supra-diaphragmatic tumour that was punctured, while the determination was made on the premise of the fabric suctioned-from little pleural knobs.

A broadly suggested demonstrative apparatus in case of suspected mesothelioma is the video thoracic copy. It permits for inspecting as much fabric as fundamental to carry out immunohistochemical examinations required for the ultimate determination.[4] IHC plays an vital part in pathology, especially within the subspecialties of oncologic pathology, neuropathology, and hematopathology. Utilization thinks about are uncommon, but a few creators have checked on the demonstrative utility of IHC in surgical pathology.[6,7,8] Within the displayed case, it was the USG guided biopsy that permitted for making the ultimate conclusion.

4. Conclusions

Mesothelioma may be a tumor causing numerous demonstrative troubles. It, and particularly its localised form, has a place to uncommon neoplasms. Be that as it may, we

will be near to conclusion by the assistance of CECT, biopsies and immune-histochemical markers.

5. Conflict of Interest

None.

6. Source of Funding

None.

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Cite this article Bujadia AK, Choudhary A, Bakoliya A. Case report of malignant mesothelioma. *IP J Diagn Pathol Oncol*. 2025;10(1):42-44.