International Journal of Medical and Health Research
Online ISSN: 2349-4182 Print ISSN: 2349-5979
www.medicalsciencejournal.com
Volume 1; Issue 5; December 2015; Page No. 04-06

Malignant pleural mesothelioma

[1] Mukul Bedi, [2] Rahul Gadekar, [3] Arun Tyagi, [4] Marcia Waran, [5] Sandip Patel, [6] Nikhil jariwala

[1, 3] Professor and Head Department of Medicine, Pvvpf's Medical College, Vilad Ghat, Ahmednagar, Maharashtra, India

[2, 4] Associate Professor Department of Medicine, Pvvpf's Medical College, Vilad Ghat, Ahmednagar, Maharashtra, India

[5, 6] Resident Department of Medicine, Pvvpf's Medical College, Vilad Ghat, Ahmednagar, Maharashtra, India

Abstract
Malignant mesothelioma is a rare tumor of pleura. One such case in a 35 year/old female, housewife by occupation, who presented with c/o Left sided chest discomfort & dry cough since last three weeks without pleural effusion and had no history of asbestos exposure, is reported here. An unusual presentation, and implications are discussed.

Keywords: Mesothelioma, Solitary fibrous tumor of pleura

Introduction
Malignant pleural mesothelioma is the most common neoplasm of pleura [1]. It is a cancerous proliferation of mesothelium cells that involve a large extent of pleural cavity [2]. Asbestos exposure is most common etiological factor which was well proven [3]. There are unusual presentations also reported, though rarely [4]. We report here one such case.

Case History
30/F, housewife by occupation, presented with c/o Left sided chest discomfort & dry cough since last three weeks. No h/o asbestos exposure, addiction, TB, DM, HTN, Bronchial asthma. No h/o lung malignancy in the family. On general examination, patient was well built & moderately nourished and had no cyanosis, clubbing, icterus or pallor. On systemic examination, left sided chest expansion was decreased, stony dullness present in the left upper zone & reduced air entry in the left lung.

Investigations
CBC, blood biochemistry and LDH were within normal limits. Chest X-ray PA view revealed a homogenous well defined soft tissue mass lesion in the left upper lobe. Pleural effusion was conspicuously absent on USG Chest. CECT chest revealed a well-defined soft tissue mass lesion seen on the left upper lobe & lingula abutting the mediastinum & costal pleural surface. Homogenous post contrast enhancement with patchy internal irregular non-enhancement suggestive of cystic degeneration or necrosis. Lesion measured approximately 79x73 mm in maximal dimension axially. There was no mediastina lymphadenopathy. Radiological diagnosis of neoplastic mass lesion (? Solitary fibrous tumour of pleura) was made. Pleural biopsy was taken to confirm the diagnosis. Pleural biopsy revealed the lesion as Malignant Mesothelioma of Pleura, arranged in papillary & glandular pattern.

Differential Diagnosis
Solitary fibrous tumor of pleura, Lung cancer (small & non-small cell) and Adenocarcinoma.

Treatment
Pt. was referred to an onco-surgeon, where she underwent pneumonectomy. She is currently on neo adjuvant chemotherapy.

Discussion
MPM is rarer tumor in India as well as in Western world. The incidence in men ranges from 7.13per million per year. In population unexposed to asbestos it is still rarer, with reported incidence of 1.2 per million per year [5, 6].

MPM usually common in males, male to female ratio of 2.6:1. It is usually related to asbestos exposure. Rarely MPM can occur in patients not exposed to asbestos. In such cases, causes are other like carcinogens, genetic factors, and viral infections [7].

Patients usually present with pleural effusions. Radiographic investigations reveal pleural effusion (exudative/hemorrhagic), pleural nodular shadows (diffuse or localized), or involvement of lungs, ribs, spine, etc. [8] Pleural fluid cytology may sometimes reveal the diagnosis, but usually definitive diagnosis is based on histological evidence on examination of pleural tissue.

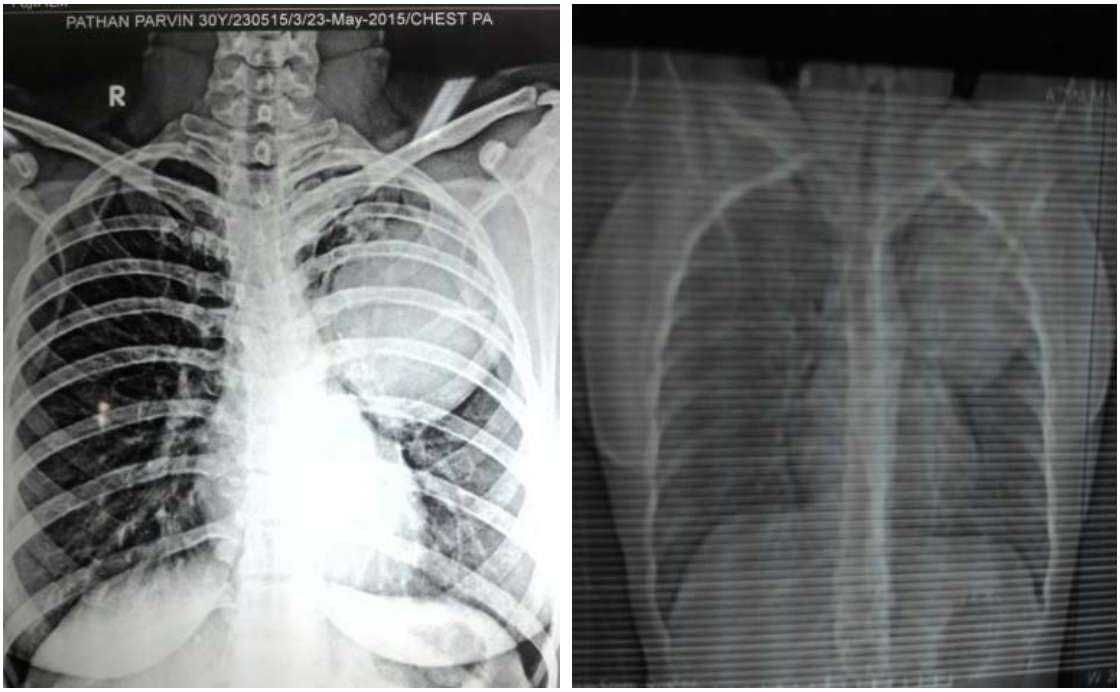

Fig 1: chest xray showing a homogenous well defined soft tissue mass lesion in the left upper lobe.

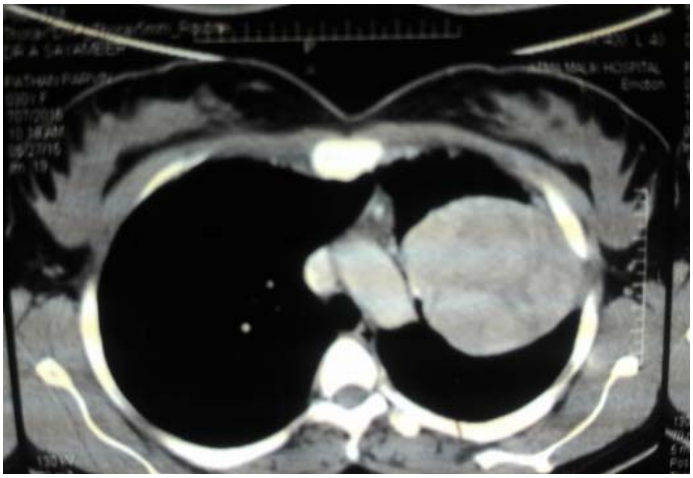

Fig 2: CECT scan showing a well-defined soft tissue mass lesion seen on the left upper lobe & lingual abutting the mediastinum & costal pleural surface.

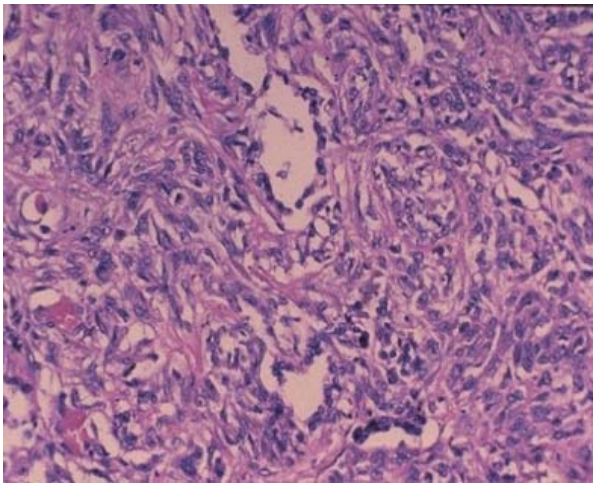

Fig 3: Microscopic appearance which shows neoplastic cells

Arranged in solid nests, cytologic atypia, and hyperchromic nuclei suggestive of mesothelioma (H and E stain; ×40) rarely it can occur in patients not exposed to asbestos arranged in papillary & glandular pattern.

Histologically, MPM are of three types: (a) sarcomatoid type, appearing as a spindle cell carcinoma resembling fibrosarcoma, (b) epithelial type, consisting of cuboidal, columnar, or flattened cells forming a tubular and papillary structure resembling adenocarcinoma, and (c) biphasic type, containing both epithelial and sarcomatoid(mixed) patterns. The histological picture in this case was suggestive of epithelial type.

In a retrospective study, only 15 cases were reported over a 25-year period. Another study2 reported only three cases over a 10-year period [9].

Whether this is because of lesser number of cases, or lesser awareness and diagnosis, is difficult to predict.

References

1. Patel SN, Kettner NW. Malignant pleural mesothelioma: A case report. J Manipulative Physiol Ther. 2005; 28:724-9.
2. Nadgouda UG, Soppimath SS, Datta KS, Shiggaon UN, Babu KR. Malignantpleural mesothelioma. J Assoc Physicians India. 2001; 49:1208-9.
3. Bruce WS, Robinson MD, Lake RA. Advances in malignant mesothelioma. N Engl J Med. 2005; 353:1591-601.
4. Kashyap AS, Kashyap S. An elderly man with pleural effusion andabnormal behaviour. Postgrad Med J. 2001; 77:407-8.
5. Miller BH, Rosado-de-Christenson, Mason AC, Fleming MV, White CC, Krasna MJ. Malignant pleural mesothelioma: Radiologic-pathologiccorrelation. Radiographics. 1996; 16:613-44.

6. Hansen J, Klerk NH, Musk AW, Hobbs MS. Environmental exposure t crociodolite and mesothelioma: Exposure response relationship. Am JRespirCrit Care Med. 1998; 157:69-75.
7. Fraser RC, Colman N, Pare PA. Synopsis of diseases of chest. 3 rd ed. Elsevier India Pvt. Ltd; 2006.
8. Wang ZJ, Reddy GP, Gotway MB, Higgins CB, Jablons DM, Ramaswamy M *et al*. Malignant pleural mesothelioma: Evaluation with CT, MR imaging and PET. Radiographics. 2004; 24:105-19.
9. Kini U, Shariff S, Thomas JA. Primary pleural mesothelioma in S. India.