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PANCOAST TUMOR –A CASE REPORT

Medicine

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ABSTRACT

The Pancoast-Tobias syndrome involves severe and unrelenting shoulder and arm pain along with the distribution of the eighth cervical and first and second thoracic nerve trunks, Horner's syndrome. Incidence of pancoast tumor is 3 per 100,000 population.
We here in report a case of 65 yr old male who had chest radiograph findings with suspicion towards pancoasts tumor which was confirmed by HRCT and histopathological correlation. This is few documented cases of pancoast syndrome in india.

KEYWORDS

Pancoast Tumor , Horners Syndrome

INTRODUCTION:

The terms Pancoast *tumors, superior sulcus tumors*, and *superior pulmonary sulcus tumors* have been applied to neoplasms located at the apical pleuropulmonary groove[1]. In 1924, Henry K. Pancoast, MD, described a patient afflicted with a carcinoma occupying the apical thoracic cavity that was associated with a constellation of symptoms that included shoulder pain radiating down the arm, atrophy of the hand muscles, and Horner's syndrome[3]. Since then, it has become widely accepted that the term *Pancoast syndrome* can be applied to any clinical condition in which a neoplasm in the apex of a lung is accompanied by shoulder or arm pain[2]

CASE REPORT:

A 65 yr old male came with complaints of decreased appetite with cough with expectoration since 2 months with grade 3 breathlessness with shoulder pain over right side radiating to axilla and medial aspect of scapula with wasting of small muscles of hand and tenderness over 1st and 2nd ribs on auscultation diminished breath sounds over right side of upper zone. On chest radiograph diffuse homogenous opacity over right upper zone (FIG 1)

On CT Thorax ill defined heterogenous opacity measuring about 15x11x11 cm with infiltration of adjacent lung parenchyma, extending to neck, chest wall and vertebrae with vertebral destruction and intraspinal extension(FIG 2 & 3).

Biopsy taken and hsitopathological findings suggestive of adenosquamous carcinoma.

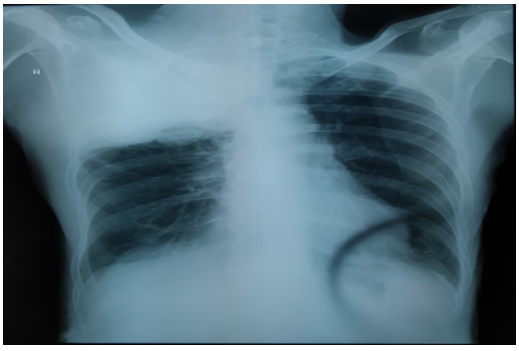

Fig -1:- Ap View Of Chest Showing Apical Opacity In Right Upper Lobe Suggestive Of Pancoast Tumor

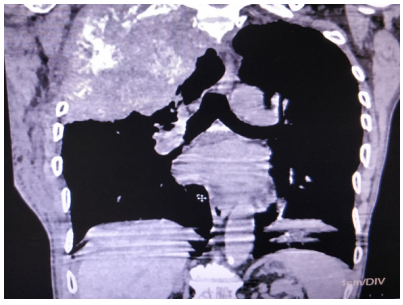

Fig-2 :- Ct Thorax Showing Ill Defined Heterogenous Opacity Measuring About 15x11x11 Cm With Infiltration Of Adjacent Lung Parenchyma

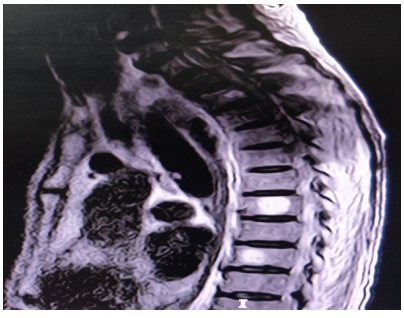

Fig 3:- Ct Thorax Lateral View Infiltration Of Adjacent Lung Parenchyma, Extending To Neck, Chest Wall And Vertebrae With Vertebral Destruction And Intraspinal Extension

DISCUSSION:-

- Superior sulcus carcinomas have the same biologic behavior as lung carcinomas located in the lung parenchyma. Consequently, their diagnosis, staging, and treatment follow the same principles as for any other lung cancer(4). The unique characteristics of Pancoast tumors are related to the anatomy of the region where these tumors occur (thoracic inlet) and not to their biologic behavior(5).
- Pancoast tumors are a relatively rare subset of non-small cell lung cancers (NSCLC), accounting for fewer than 5% of all lung cancers. At least 50% of cases are adenocarcinomas, while the rest are squamous cell and large-cell carcinomas. Small cell carcinoma occurs rarely(6).

- Patients often present with complaints of pain distributed to the upper anterior chest wall. These tumors may manifest with signs and symptoms related to the compression or infiltration of the middle and lower trunks of the brachial plexus such as shoulder and arm pain (in the distribution of the C8, T1, and T2 dermatome).
- The peripheral location of these tumors minimizes standard lung cancer symptoms such as cough, hemoptysis, and dyspnea and is the main reason why patients with Pancoast tumors present at a later stage of diagnosis(7).
- Pancoast tumors are diagnosed through history and physical examination, chest radiographs, and tissue biopsy. CT scan with intravenous contrast and PET scanning have become the initial radiologic evaluations for these tumors. The major benefits of CT scanning relate to its ability to identify a tumor mass as distinct from apical pleural thickening and to assess the presence of bone destruction and invasion of the chest wall and root of the neck(8).
- Diagnosis is established through biopsy of the mass. Given their location, these lesions are amenable to CT or ultrasound-guided fine-needle aspiration.
- Treatment involves radiotherapy ,surgery and chemotherapy

CONCLUSION:

- Multidisciplinary approach is of paramount importance in the management of Pancoast tumors. This rare disease necessitates specialist knowledge for each different treatment proposed. Surgical treatment of T4 disease requires the participation of a multidisciplinary surgical team.
- The collaboration between thoracic, spine, and vascular surgeons may be needed to achieve complete resection in vertebral and vascular tumor involvement that are no longer a contraindication to resection. Surgery for extensive involvement of the brachial plexus is the new hurdle to overcome in T4 disease management.
- Most of the time we miss the diagnosis until late after invading the brachial plexus roots.
- Hence multidisciplinary approach is necessary to treat this tumor after diagnosis.
- Along with surgery , chemo-radiotherapy plays a pivotal role in its management and better prognosis.

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