



Adenocarcinoma Lung with a Central Presentation

Authors

Dr Lakshmanan¹, Dr Anandha Kumar², Prof. Dr L.Stanley³, Prof. Dr D. Rajasekaran⁴

¹Postgraduate, ²Assistant Professor, ^{3,4}Professor

Department of General Medicine,

Chettinad Hospital and Research Institute, Chennai

Abstract

Non small cell carcinoma comprises 80% of lung cancer. Of which adenocarcinoma is the commonest. It is the most frequently diagnosed subtype in women, as well as in non-smokers, and their symptoms usually correlate with the disease. It is largely peripheral in location. Here we report an unusual case of centrally located adenocarcinoma in a 65year old female in the late stages of disease with few symptoms.

Keywords: Lung cancer, Adenocarcinoma, Central location, Lepidic pattern.

Introduction

The World Health Organization (WHO) defines lung cancer as tumors arising from the respiratory epithelium (bronchi, bronchioles, and alveoli). The WHO classification system divides epithelial lung cancer into small cell and non small cell carcinomas. Non-small cell lung carcinoma constitutes Squamous cell carcinoma, adenocarcinoma and large cell carcinoma. Adenocarcinoma has become the most frequent histologic subtype of lung cancer. Adenocarcinoma incidence has been increasing and replaced squamous carcinoma. In adenocarcinoma, the histopathological patterns are acinar, papillary, solid and Lepidic. A subtype of adenocarcinoma is Bronchioloalveolar carcinoma (BAC). The definition of bronchioloalveolar carcinoma requires that the tumor have a pure lepidic growth pattern without evidence of stromal, vascular, or pleural invasion. However, there was a significant modification to the WHO classification system is

the discontinuation of the terms bronchioloalveolar carcinoma.

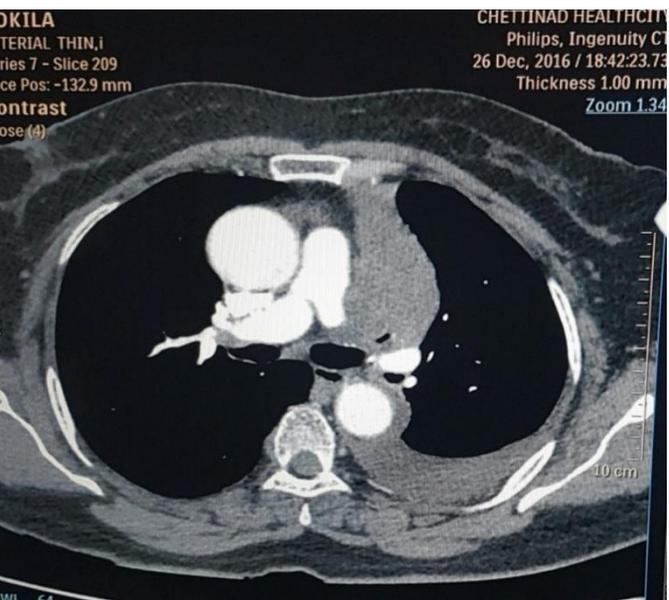
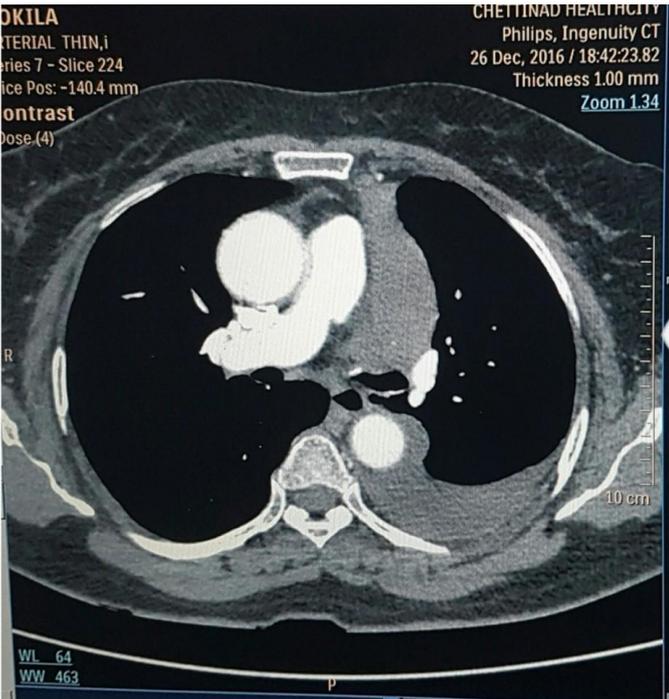
Case Report

65 year female presented with Complaints of breathlessness for the past 4months with a gradual onset, progressed from grade 3 to grade 4 and was aggravated on exertion. There was no history of orthopnoea or PND. Cardiac cause of breathlessness were ruled out. She also had complaints of hoarseness of voice since 4 months. Along with dry cough. She was recently diagnosed as a diabetic and a hypertensive and treated accordingly.

On examination she was conscious, oriented, afebrile and obese. Her vitals were stable. Her oxygen saturation was 97% at room air. Examination of the respiratory system showed features consistent with a left sided pleural effusion; other system were normal. Blood investigations were normal except for a raised ESR.

Chest radiograph was suggestive of a raised left hemi diaphragm and left pleural effusion. Biochemical analysis showed an exudative pleural effusion, cytology was negative for malignant cells.

A Contrast enhanced CT imaging of chest was performed and it revealed large heterogenous enhancing mass lesion in left parahilar region, encasing the left upper lobe bronchus with collapse of left upper and lingular lobe. Encasing of left pulmonary artery was also seen.

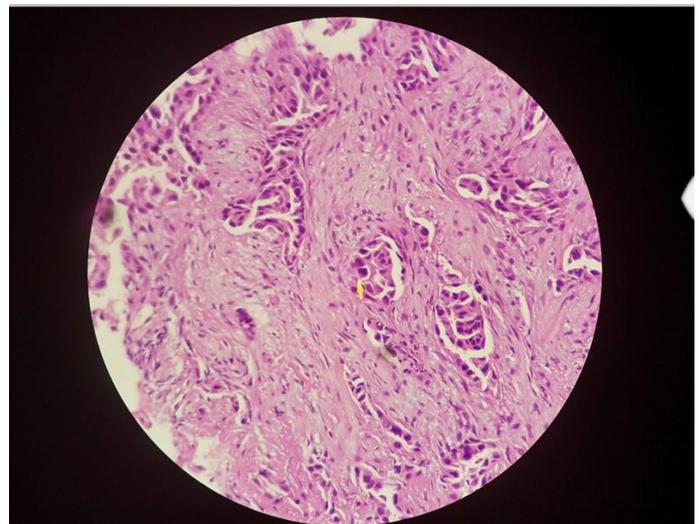


Medially, the lesion is invading the mediastinal pleura, pericardium and aorta pulmonary window

and left main bronchus. The mass is abutting the Left atrium, Left pulmonary vein and Aortic arch. Moderate pleural effusion on left was present. Subcentimetric left lower paratracheal and para aortic lymph nodes were present.

The patient underwent a Bronchoscopy guided biopsy.

Histopathological examination of the tissue revealed Non Small Cell Carcinoma of Lung; Positive for malignancy and Adenocarcinoma with lepidic pattern. Thus, the patient was diagnosed to have Adenocarcinoma with lepidic pattern.



In view of advanced disease, the patient and her relatives opted for palliative care.

Discussion

In this case though the patient presented within 3 months of symptoms, the palliative treatment was the only possibility due to its central presentation and access issues.

Pulmonary adenocarcinoma generally occurs in peripheral lung tissue, however, central lesions accounted for 13.3% of all patients undergoing surgical resection. The treatment varies based on the location.

Peripherally situated adenocarcinoma enables wedge resection of suitably small lesions, while adenocarcinoma in central locations usually required lobectomy, regardless of tumor size or opacity. If more than lobectomy was needed, mediastinal lymph node evaluation (dissection or sampling) was routinely performed at the same time in most central tumor resections resulting in higher nodal counts for greater accuracy of staging. Higher malignant potential may be ascribed to central adenocarcinoma, given its more invasive attributes.

Conclusion

In early (stage I) disease, the prognosis is comparatively worse for central adenocarcinoma, owing to significant micromorphologic differences in central and peripheral tumors. The management of NSCLC has undergone major change in the past decade. The centrally located pulmonary adenocarcinoma is detected in an advanced stage for many patients.

Tumors that are centrally located or have demonstrated invasion into the pulmonary hila or mediastinal structures needs special consideration.

References

1. Travis WD, Brambilla E, Noguchi M, et al. International association for the study of lung cancer/american thoracic society/european respiratory society international multidisciplinary classification of lung adenocarcinoma [PubMed]
2. Kadota K, Villena-Vargas J, Yoshizawa A, et al. Prognostic significance of adenocarcinoma in situ, minimally invasive adenocarcinoma, and nonmucinous lepidic predominant invasive adenocarcinoma of the lung [PubMed]
3. Brambilla E, Travis WD, Colby TV, Corrin B, Shimosato Y. The new World Health Organization Classification of lung tumours. *Eur Respir J*.
4. Mountain CF. A new international staging system for lung cancer. *Chest*. 1986;89:225–233. [PubMed]
5. Yesner R. Classification of lung cancer histology. *N Engl J Med*. 1985;312:652–653. [PubMed]