International Journal of Research and Review
www.ijrrjournal.com E-ISSN: 2349-9788; P-ISSN: 2454-2237

Case Report

Bronchioloalveolar Carcinoma Masquerading As Pneumonia: A Case Report

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ABSTRACT

Lung carcinoma is one of the most common cause of mortality all over the world. Many a times , diagnosis gets delayed due to atypical presentation. We present a case of BAC who presented as pneumonia.BAC should always be considered in differential diagnosis of non resolvingpneumonia .Timely diagnosis is required to avoid a bad prognosis.

Key-words: BAC, bronchoscopy

INTRODUCTION

Lung cancer is a leading cause of mortality in the developed countries. It is now rising at an alarming rate in developing countries like India. The proportions of lung cancers that are classified as adenocarcinoma represent approximately one half of all the cases. [1] However, the incidence of adenocarcinoma in situ (Bronchioloalveolar carcinoma) remains uncertain. It has a variable clinical presentation ranging from a solitary pulmonary nodule to a diffuse infiltration of the lung parenchyma, thus delaying the diagnosis of an aggressive lung cancer. [2,3]

CASE REPORT

A 25 year old gentleman presented to the emergency department with complaints of cough with copious amounts of watery, non purulent sputum production. He also complained of intermittent episodes of fever and breathlessness which aggravated on lying in the supine position. The patient was a chronic smoker since 5 years. His father had succumbed to lung cancer at a young age. Patient was already on antitubercular medicines on the basis of Chest X-ray (fig 1) along with antibiotics and antifungal medications for 10 days from a private hospital with no symptomatic improvement.

On general physical examination, he was tachypnoeic and febrile. Vocal resonance and fremitus were increased in right mammary area. Bilateral vesicular breath sounds were heard in all lung fields along with coarse crepitations heard bilaterally in all lung fields. Laboratory investigations revealed a rise in the total leucocyte count (33200/cumm - 89% neutrophils).

The chest radiograph demonstrated patchy opacities in the right upper and mid zone and in the left mid zone with air bronchograms. The CT scan of the chest showed multiple areas of consolidation with heterogenous enhancement involving the right lung with air bronchograms. Patchy areas of consolidation with ground glass

opacities were also noted in the left lung (Fig 2). A differential diagnosis of cryptogenic organising pneumonia and bronchioloalveolar carcinoma was given.

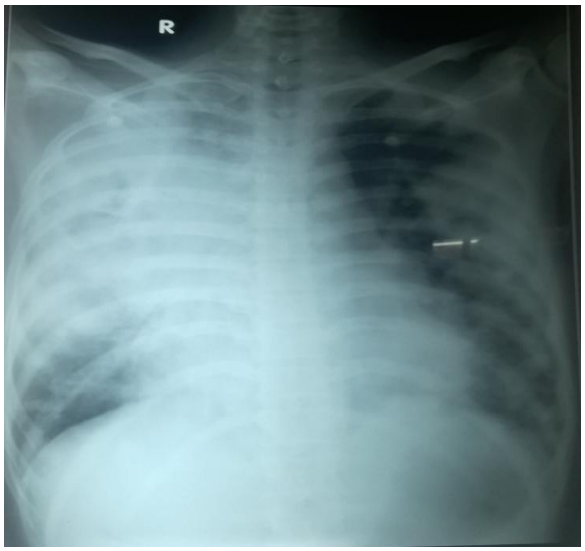

Figure 1: chest X-ray of patient

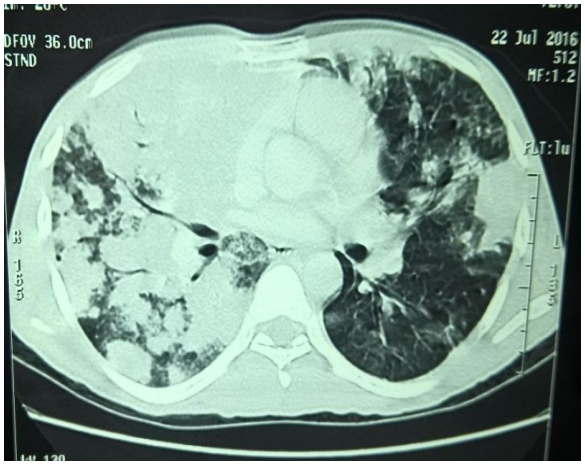

Figure 2: CT scan of the patient

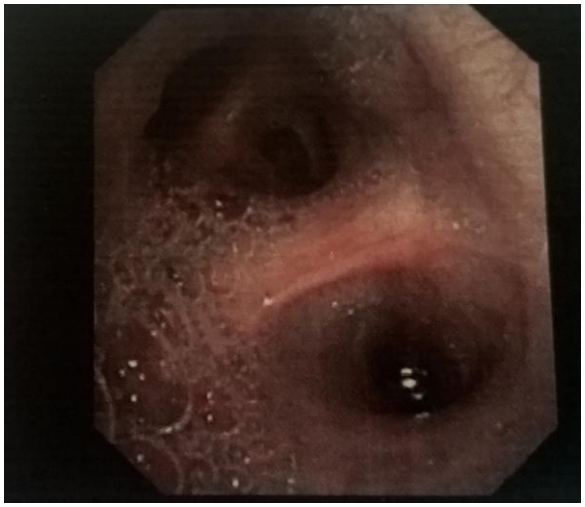

Figure 3: Bronchoscopic Findings

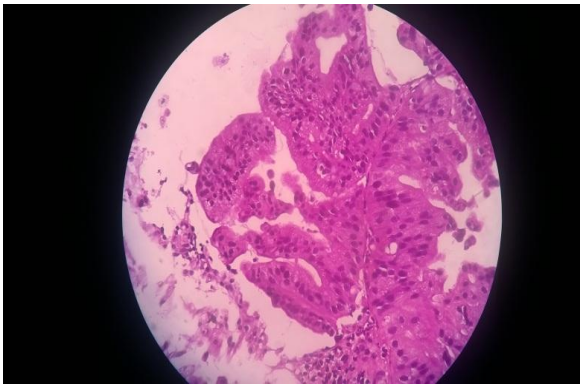

Figure 4: Histopathology of the biopsy

Sputum was negative for acid fast bacilli and atypical cells. Bronchoscopy showed copious amount of serous secretions which tested negative for acid fast bacilli and malignant cells. A CT guided biopsy was performed which revealed features favouring adenocarcinoma. Immunohisto-chemistry demonstrated positivity towards CK7. It was negative for CK20 and TTF1. A diagnosis of mucinous adenocarcinoma was made. The patient was referred to an Oncologist for further management.

DISCUSSION

Bronchioloalveolar carcinoma is a subtype of adenocarcinoma of the lung that is noted for its peripheral location and growth along the intact alveolar septae (lepidic growth pattern). It has a tendency for both aerogenous and lymphatic spread. It is divided into mucinous, non mucinous and mixed sub types. [4] The two types have different therapeutic and prognostic implications. [5] Ultrastructurally, the mucinous BAC is probably derived from respiratory goblet cells while the non mucinous variants show immunophenotypic features of Clara cells or type 2 pneumocytes. Thyroid transcription factor 1 is positive in more than 90% of patients with non mucinous carcinoma while it is uncommon in the mucinous variety.

The disease is characterised by its wide range of clinical manifestations from a solitary pulmonary nodule to a diffuse infiltration of the lung parenchyma resembling bacterial pneumonia. In addition to this, there can be a substantial variation in

the natural history of the disease and its progression. Patients who present with a solitary peripheral nodule are most likely to have adenocarcinoma in situ and have a good prognosis. They are often asymptomatic at presentation. [6]

Patients with a more extensive disease on the other hand, present with a picture similar to lobar consolidation. The presenting symptoms are: cough, shortness of breath and haemoptysis. Systemic symptoms of fever and weight loss may accompany the above. Some patients may have evidence of systemic metastases. The most common sites include the contralateral lung, bone, adrenal gland and brain. The CT scan typically shows air bronchograms. These are mostly mucinous adenocarcinomas. This diagnosis can be considered only when the clinical and radiographic features fail to respond to the antibacterial treatment, as was noted in our patient. However, this "pneumonic" variety of BAC has a very poor prognosis. [7]

CONCLUSION

Bronchioloalveolar carcinoma has diverse clinical and radiological manifestations. It often masquerades as commoner diseases. It should be considered in the differential diagnosis of patients presenting with features of bacterial pneumonia that does not respond to antibiotics in order to ensure timely diagnosis and treatment of the same.

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How to cite this article: Mascarenhas DG, D'souza S. Bronchioloalveolar carcinoma masquerading as pneumonia: a case report. International Journal of Research and Review. 2019; 6(7):408-410.

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