Abstract: Bronchioloalveolar cell carcinomas are a heterogenous group of peripheral lung tumors that arises from any epithelial cell within or distal to terminal bronchioles. They constitute 2-5% of all lung cancers and show a characteristic nondestructive lepidic growth. It can present as a solitary pulmonary nodule, unifocal, multifocal consolidation, diffuse or multicentric form. We report a case of bronchioloalveolar cell carcinoma that presented with bilateral consolidation. This case can be considered as an eye opener, as the x-ray diagnosis of tuberculosis in a patient who had anti-tuberculous treatment twice in a private set up has finally turned out to be bronchioloalveolar cell carcinoma presenting bilaterally. Bronchioloalveolar cell carcinoma should be considered as a possibility in all cases of chronic non-resolving consolidation.

Keyword: bronchioloalveolar cell, bilateral, lepidic, non-resolving consolidation

Case report

40 year old female was admitted on June 2012 with complaints of progressive dyspnoea for 2 years, cough with expectoration of large amounts of whitish mucoid sputum or bronchorrhoea (figure 1), loss of appetite and weight for 6 months, low grade intermittent fever for 1 month. She had taken anti-tuberculous treatment two times in past 1 year and sputum AFB was never positive at any point of time. Clinical examination showed she was dyspnoeic, tachypnoeic and pale. Room air saturation was 75-80%. Respiratory system examination showed tubular bronchial breathing right suprascapular and interscapular areas. Chest x-ray April 2011 (figure 2a) showed homogenous opacity occupying entire left hemithorax. CT Chest (figure 2b) showed left consolidation with air bronchogram. Recent chest x-ray June 2012 showed persisting left sided lesion with new heterogenous opacity right hemithorax. CT Chest (figure 3) showed bilateral consolidation with air bronchogram. Patient had bronchoscopy done twice in a private hospital which yielded no significant results. We deferred bronchoscopy due to poor general condition. Ultrasound guided biopsy from right lung done under strict aseptic precautions. Histopathology report (figure 4a, 4b) came out as mucinous bronchioloalveolar cell carcinoma.
Discussion

WHO classifies Bronchioloalveolar cell carcinoma as a subtype of adenocarcinoma, arising from type 2 pneumocytes and bronchiolar epithelium. They are heterogenous group of peripheral lung tumours that show a characteristic non destructive lepidic growth. They constitute 2-5% of all lung cancers with equal male to female predominance. Mean age of onset is 55 to 65 yrs. Smoking is not a risk factor. Pre-existing lung scar is a risk factor. Two main types are mucinous and non mucinous Bronchioloalveolar cell carcinomas. Most common presenting symptoms are dyspnoea and cough. Typical radiological solitary pulmonary nodule is the most common presentation. It can present as spiculated nodule subpleural in location, with development of pleuropulmonary tail. CT will show ground glass opacity, halo sign, air bronchogram. CT angiogram sign is a non specific sign in contrast enhanced images defined as clearly visible vessels coursing through tumour because of contrast against background of abundant low density mucus within neoplasm. Second common presentation is multifocal consolidation with air bronchogram, bubble like lucencies or pseudocavitation. Diffuse or multircentric form is the third common presentation.

Treatment for Stage I & II is surgical resection, Stage IIIA-segmentectomy or lobectomy-definitive operation. Stage IIIB & IV are not candidates for surgery. Chemotherapy with tyrosine kinase inhibitors such as erlotinib, gefitinib, radiotherapy, palliative measures are the options. Tumours with classical EGFR mutation respond better to tyrosine kinase inhibitors. Nodes at type & non mucinous type has a better prognosis. Tumour < 2 cm, purely lepidic growth without invasion, no lymph node metastasis has 100% 5 & 10 year survival.

Presence of coexistent nodules along with peripheral pulmonary consolidation, multifocal form has a bad prognosis. Future of bronchioloalveolar cell carcinoma as a distinct entity is unclear, because in a major revision of adenocarcinoma 2011 what was earlier called bronchioloalveolar cell carcinoma is reclassified into newly defined histologic subtypes. Full diagnosis should be made only after full sectioning and examination of entire tumour. Differential diagnosis includes tuberculosis, lymphoproliferative disorder, organising pneumonia, aspiration pneumonia, pulmonary edema. Summary and Conclusion This case can be considered as an eye opener, as the x-ray diagnosis of tuberculosis in a patient who had antituberculous treatment twice in a private set up has finally turned out to be bronchioloalveolar cell carcinoma presenting bilaterally. In all cases of chronic non resolving consolidation especially with persistent sputum negativity, an alternate diagnosis other than tuberculosis should be considered and a possibility of bronchioloalveolar cell carcinoma should be ruled out in non resolving, non responding pneumonias.

References
3) Bradley S, Sabloff, Mylene T. Truonga, Ignacio I. Wistuba, Jeremy J. Erasmusa, a Department of Diagnostic Radiology, The University of Texas M. D. Anderson Cancer Center, Houston. b Department of Pathology, The University of Texas M. D. Anderson Cancer Center, Houston- "Bronchioloalveolar Cell Carcinoma: Radiologic Appearance and Dilemmas in the Assessment of Response". Clinical lung cancer Volume 6, Issue 2, September 2004, Pages 108–112.