

## CLINICAL IMAGE

# Endobronchial pleomorphic adenoma

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## Abstract

Pleomorphic adenomas are the most common tumors of the salivary glands. Rarely, they occur as benign lesions in the lungs in both the central airways and the lung parenchyma. Herein, we present a case of a 60-year-old smoker who was incidentally found to have an endobronchial mass while undergoing evaluation for a lung nodule. During bronchoscopy, a smooth globular nodule was identified at the main carina and removed using electrocautery snare. Histopathology examination revealed this to be a pleomorphic adenoma.

## ENDOBONCHIAL PLEOMORPHIC ADENOMA

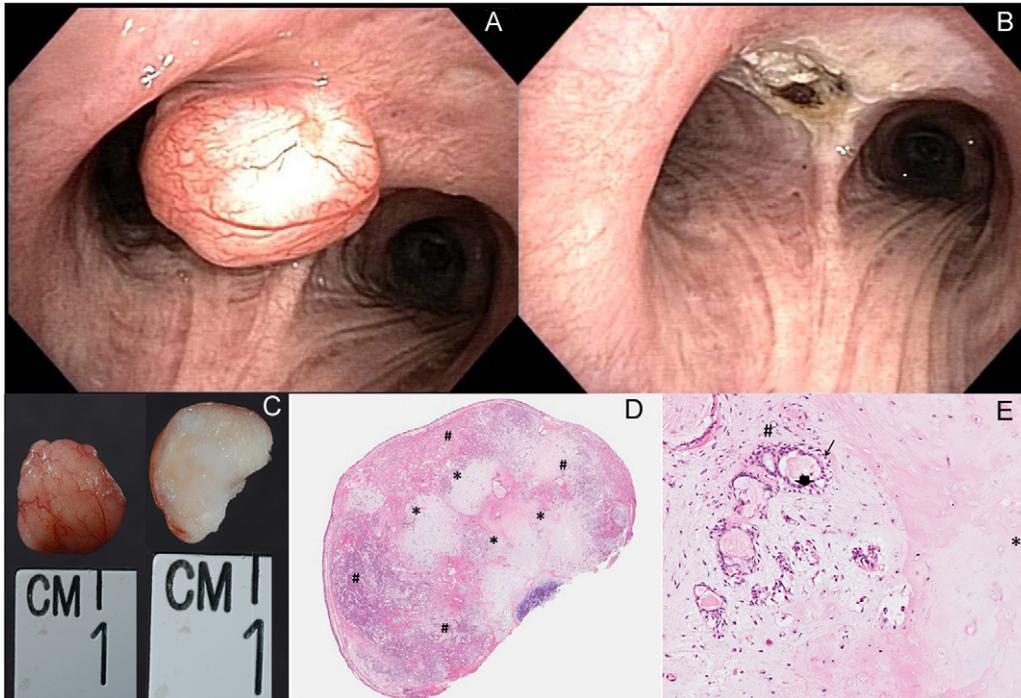
A 60-year-old former smoker presented for an evaluation of lung nodule that showed up during a routine chest X-ray. His past medical history was significant for shingles 4 years earlier and occupational exposure to asbestos and welding fumes. Computed tomography of the chest revealed a 1.4 cm nodule in the right lower lobe and an endoluminal lesion at the main carina. At a prior bronchoscopy, sampling of the right lower lobe nodule revealed a benign lesion while needle biopsy of the endoluminal lesion was found to be a pleomorphic adenoma. However, it was not removed due to risk of bleeding. At bronchoscopy, a smooth globular mass was identified at the main carina with a non-appreciable stalk (Fig. 1A). Its endobronchial portion was successfully resected by an electrocautery snare (Fig. 1B). Histopathologic examination confirmed the diagnosis of pleomorphic adenoma (Fig. 1D and E). It contained bland tubules lined by a bilayer of inner epithelial and outer myoepithelial cells in a background of myxoid and chondromyxoid stroma in some areas.

Pleomorphic adenomas, (mixed tumor), are the most common tumor of the salivary glands [1]. They are rare in the lung, and have been reported to occur in a broad age range, from 8 to 74 years old. As their salivary gland counterparts, they are benign neoplasms that in the lung are believed to arise from the submucosal bronchial glands for which they occur mostly as endobronchial lesions. However, lesions occurring in the distal lung parenchyma have been reported [2]. They are biphasic neoplasms with epithelial and myoepithelial cells and a mesenchymal component that can be mucoid, myxoid or chondromyxoid stroma [3]. The pathologic differential diagnosis includes other salivary gland-type neoplasms such as epithelial myoepithelial carcinoma and myoepithelial carcinoma, metastatic salivary gland neoplasms of head and neck, hamartomas and carcinosarcoma pleomorphic adenoma. Pleomorphic adenomas are benign lesions that can rarely show features of malignant transformation including infiltrative borders, necrosis, increased mitoses and angioinvasion [4]. The clinical presentation depends on their location in the respiratory tract. Endoluminal polypoid lesions

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**Figure 1:** Bronchoscopic view of the smooth mass at the carina (A) that was removed using electrocautery (B). Gross specimen after removal showing a smooth polypoid tumor with tan and white lobulated cut surface (C). Photomicrograph showing lobules of chondromyxoid tissue (\*) and cellular areas (#) microscopically (D, E). The lesion contains tubules lined by inner ductal cells (thick arrow) and outer myoepithelial cells (thin arrow) (1C gross picture; 1D hematoxylin and eosin 0.7x; 1E hematoxylin and eosin 12.4x).

present with shortness of breath and dyspnea while parenchymal lesions are incidental radiographic findings. Bronchoscopic or surgical removal is the treatment of choice. Long-term follow-up after treatment is advisable only if malignant transformation is present [4, 5].

#### CONFLICT OF INTEREST STATEMENT

All the authors have no conflicts of interests to declare.

#### AUTHOR CONTRIBUTIONS

All authors contributed to the acquisition of data, writing and revision of this manuscript

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#### ETHICAL APPROVAL

Ethical approval exempt in this case. Not applicable.

#### CONSENT

Informed consent was obtained from the patient.

#### GUARANTOR

Dr Atul Mehta is the guarantor of the work.

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