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Case Report

Bronchial Oncocytoma - A Case Report

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A B S T R A C T

Oncocytoma is an uncommon benign tumor found at sites such as salivary glands, kidneys and thyroid. It's occurrence in bronchus is rare. The incidence of oncocytoma is higher in males as compared to females. A 34-year-old male patient with a nodule in the right upper lobe was found to be a case of oncocytoma on endobronchial biopsy.

Keywords: Oncocytoma, Kidney, Thyroid, PET-CT scan, Mitochondrioma, Salivary Gland, Eosinophilic Cells, Adenohypophysis

Introduction

Oncocytoma is an uncommon benign tumor found at sites such as salivary glands, kidney and thyroid.[1,2] Its occurrence in the bronchus is rare. The incidence of oncocytoma is higher in males as compared to females.[2] Oncocytomas are generally slow-growing tumor and are small in size. In most cases, the tumor is found incidentally.[3] Oncocytoma is an uncommon benign tumor which is characteristically composed of large eosinophilic cells with eosinophilic granular cytoplasm and vesicular nucleus.[4,6]

The term oncocytoma was introduced by Jaffé in 1932 for salivary gland tumors formed exclusively or mainly by oncocytes. Names such as oxyphilic adenoma and mitochondrioma have been suggested in place of oncocytoma.[3]

Oncocytic tumors have been found in other glandular tissues, such as the thyroid, parathyroid, lacrimal, adenohypophysis, kidneys, and pancreas. Regardless of the site, all had very similar features.[3,4,5] Oncocytomas in bronchial glands are extremely rare. Fechner and Bentick reported the first case diagnosed after electron microscopy in 1973. Only nine cases have been reported since then.[3]

Case Report

Our patient, a 34-year-old male presented with complaints of cough, low-grade fever for 3 months. He also had two episodes of haemoptysis in the last 2 months. The patient was evaluated clinically and primary investigations such as CBC and Chest X-ray were advised. CBC showed mild anemia with other parameters within the normal range. Chest X-ray findings showed a nodule in the right upper lobe.

Following these, a PET-CT scan was done. Positron émission tomography and CT scans showed an increase in metabolic activity. CT scans of the abdomen and pelvis were done, which ruled out any extra-thoracic lesion. The patient was then taken up for an endobronchial biopsy. A biopsy specimen greyish white in colour, measuring 0.6 x 0.3x 0.2

cm was received for histopathological examination which was then processed and stained with H & E.

The Stained sections from the biopsy tissue showed sheets of benign large round eosinophilic cells (oncocytes) with dense granular cytoplasm, nuclei were round and regular with even chromatin, and small but inconspicuous nucleoli were also noted. There were few mitotic figures. The lining bronchial epithelium showed normal histology.

To confirm the diagnosis, immunohistochemistry was done considering neuroendocrinal tumors as differential.

On immunohistochemistry, the tumor was found to be positive for p63, and cytokeratin and negative for synaptophysin, chromogranin, and CD56.

After this, the diagnosis of oncocytoma was made. Positive for p63.

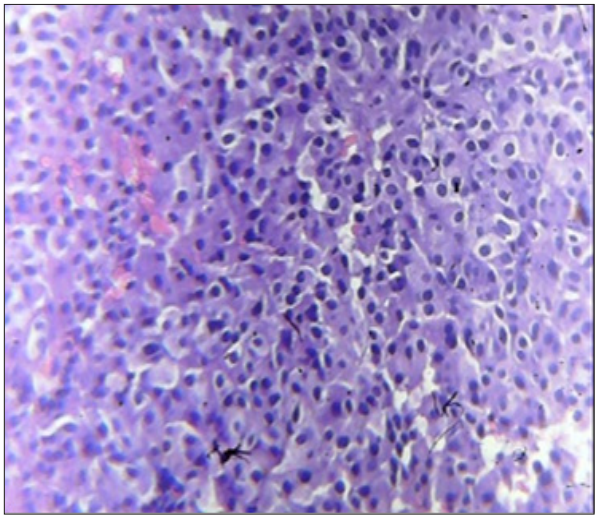

Figure 1.H&E Section Showing Sheets of Oncocytes (40 X 10 X)

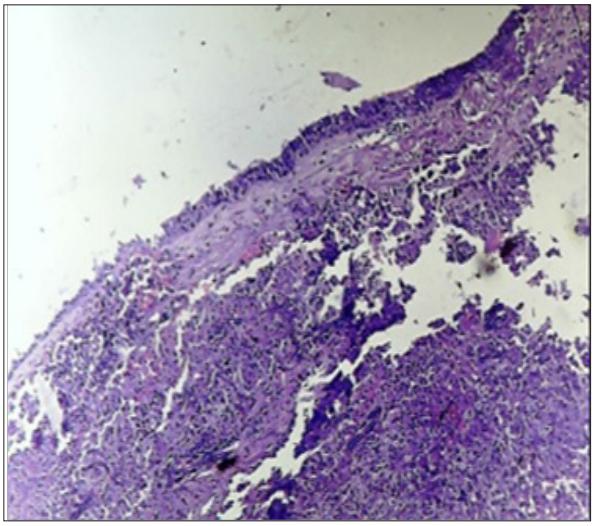

Figure 2.H&E Section Showing Normal Bronchial Epithelium(10X10 X)

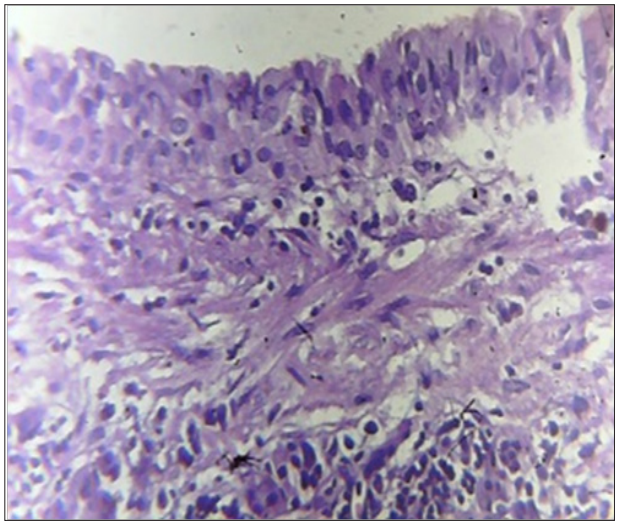

Figure 3.H&E Section Showing Normal Bronchial Epithelium with Underlying Sheets of Oncocytes (40 X10 X)

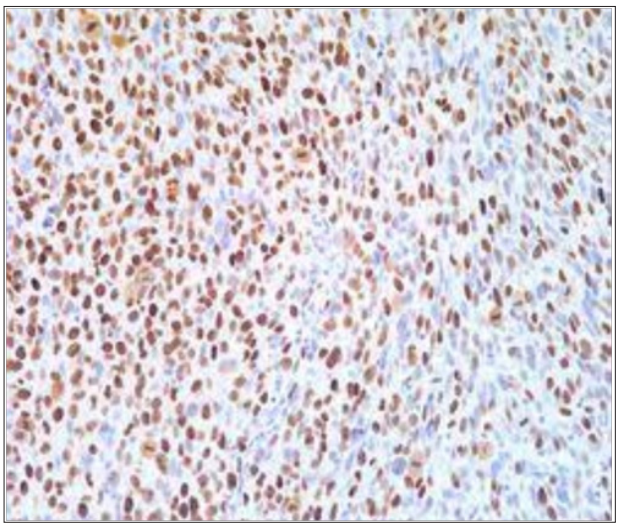

Figure 4.Oncocytes Positive for p63 (40 X10 X)

Discussion

Oncocytomas are rare benign tumors and it's occurrence in the bronchus requires a thorough histopathological evaluation along with immunohistochemistry for confirmation.

Fechner and Bentick reported the first case diagnosed after electron microscopy in 1973. Only nine cases have been reported since then.[3] The clinical manifestations of oncocytoma have no specific and the diagnosis depends on the pathological study. Burrah et al.[7] reported a case of a 16-year-old girl with a history of cough, expectoration, low-grade fever, and occasional hemoptysis of 6 months duration. CT scan showed a mass lesion in the left upper lobe. The girl underwent a thoracotomy and pulmonary oncocytoma was finally confirmed by pathological diagnosis.[7]

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This case is similar to other reported cases of bronchial oncocytoma in which a tumor was found in the bronchus of an adult male patient.[2] Oncocytomas have variable malignancy potential. Although oncocytomas are usually benign, there are reports of malignant oncocytomas in salivary glands, thyroids, nasal cavities, paranasal sinuses, and the mediastinum.[3]

Despite being a benign tumour, follow-up should be done to rule out recurrence or metastases.

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