



POST-COVID ASPERGILLOMA ENDED UP WITH LOBECTOMY: A CASE REPORT

Cardiothoracic Surgery

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ABSTRACT

A 45-year diabetic male with a history of COVID-19 (April, 2021) was referred to our Centre for recurrent hemoptysis with suspected aspergilloma in upper lobe of the left lung. He was being managed with antifungal medication along with panel of investigations for surgical planning. CT thorax image was suggestive of aspergilloma, but bronchoscopic biopsy revealed no fungal element. Fungal biomarkers were negative for aspergillosis. Then we planned for surgical resection of the lesion but ended up with upper lobectomy because of macroscopic involvement of the surrounding lung parenchyma. Final histopathology report of the surgical specimen came out to be invasive aspergillosis. The patient was discharged on postoperative day eight with uneventful postoperative period.

KEYWORDS

COVID-19, aspergilloma, aspergillosis, hemoptysis, lobectomy

INTRODUCTION:

Incidence of aspergilloma in post-COVID pneumonia is not uncommon but reporting of lobectomy in these patients is rare. Here we will present a case of 45-year diabetic male who had to undergo left upper lobectomy for recurrent hemoptysis from invasive aspergilloma which was not responding to antifungal treatment.

CASE REPORT:

A 45-year diabetic non-smoker male who got admitted in hospital for COVID pneumonia requiring BiPAP support and was kept hospitalized for 56 days (April to May, 2021), was referred to our Centre for recurrent hemoptysis for last four months. On Chest X-ray (Figure 1), there was a heterogenous ill-defined round opacity in the upper part of the left lung.

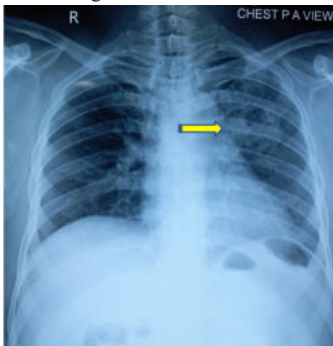


Figure 1: Ill-defined heterogenous opacity in left lung

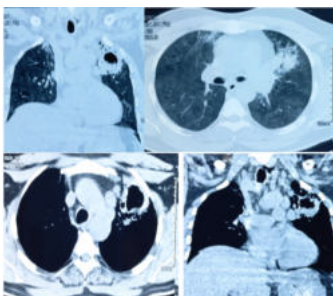


Figure 2: HRCT thorax showing cavitary lesion in left upper lobe of the lung

HRCT thorax revealed thick-walled cavity with soft tissue within it and surrounding fibro-bronchiectatic changes in the apico-anterior segment of the left upper lobe of the lung (Figure 2). On bronchoscopy, left upper lobe segments appeared inflamed, edematous, and friable to touch, biopsy was taken but it was negative for granuloma, fungal element, and malignancy. Fungal biomarkers were negative for aspergillosis.

Then we planned for surgical resection after obtaining a fresh negative COVID RT-PCR report. Our approach was via left posterolateral thoracotomy. After entering the pleural cavity via 5th intercostal space there was no pleural effusion, but few apical adhesion bands were present. A 4cm×5cm ill-defined soft tissue mass was palpable with extension into surrounding lung parenchyma in left upper lobe. Left upper lobectomy was performed after dissection, ligation and division of pulmonary artery, vein, and upper lobe bronchus sequentially. Absence of air-leak was confirmed. Surgical specimen was sent for histopathological examination, and it came out to be invasive aspergillosis. Post-operative period was uneventful. Post-operative Chest X-ray and HRCT thorax were satisfactory (Figure 3). The patient was discharged on postoperative day eight.

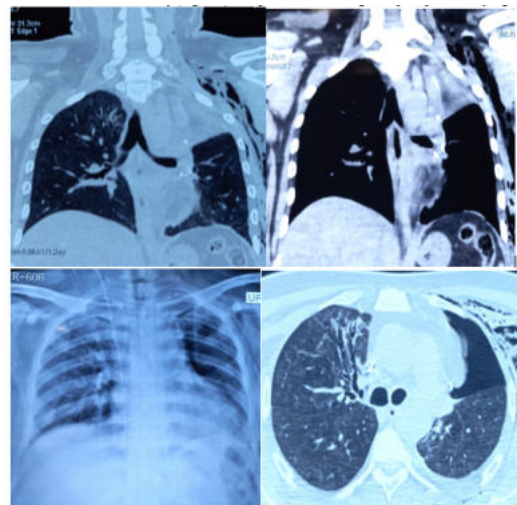


Figure 3: Post-operative Chest X-ray and HRCT thorax showing post-lobectomy status

DISCUSSION:

Starting from its spread from Wuhan, China, the novel Coronavirus (COVID-19) outbreak was declared to be a “pandemic” on 11th March 2020 by the World Health Organization (WHO). Since then, it has been a significant cause of morbidity and mortality worldwide. Among them one subset of patient is developing COVID-19/Coronavirus associated pulmonary aspergillosis, also known as CAPA, which are occurring even in the absence of risk factors of aspergilloma [1]. The mortality from CAPA is crossing 40% as reported from the numerous studies [2]. Early diagnosis can be made from the samples obtained from the respiratory tract by fungal study like culture, polymerase chain reaction (PCR) or fungal biomarker like galactomannan (GM) or β -D glucan (BDG) with supporting imaging investigations like HRCT thorax [3]. The use of Voriconazole must be done with cautions because of cardiac complications (QTc prolongation), the drug-drug interactions and liver function derangements. The cornerstone of management of CAPA is early diagnosis and initiation of proper antifungal medications [2], and for those who are not responding to antifungals or remain persistently symptomatic particularly with recurrent hemoptysis, the surgical resection is the only option.

DECLARATIONS

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CONFLICT OF INTERESTS: The authors declare that there is no conflict of interest.

ETHICS APPROVAL: This study was approved by the Institutional Ethical Committee and

CONSENT TO PARTICIPATE: Informed consent to participate was taken from the patient's relatives in their own language.

CONSENT FOR PUBLICATION: Informed consent for publication was taken from the patient's relatives in their own language.

AVAILABILITY OF DATA & MATERIAL: Available

CODE AVAILABILITY: Not applicable.

AUTHORS' CONTRIBUTIONS: Equal.

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