

Clinical-Medical Image

Invasive Cavitory Pulmonary Mucormycosis in an Immunocompetent Patient

Seyed-Mehdi Hashemi-Bajgani¹ and Mahdi Hosseini^{2*}

¹Department of Internal Medicine, School of Medicine, Afzalipour Hospital, Kerman University of Medical Sciences, Kerman, Iran

²Department of Internal Medicine, Kerman University of Medical Sciences, Kerman, Iran

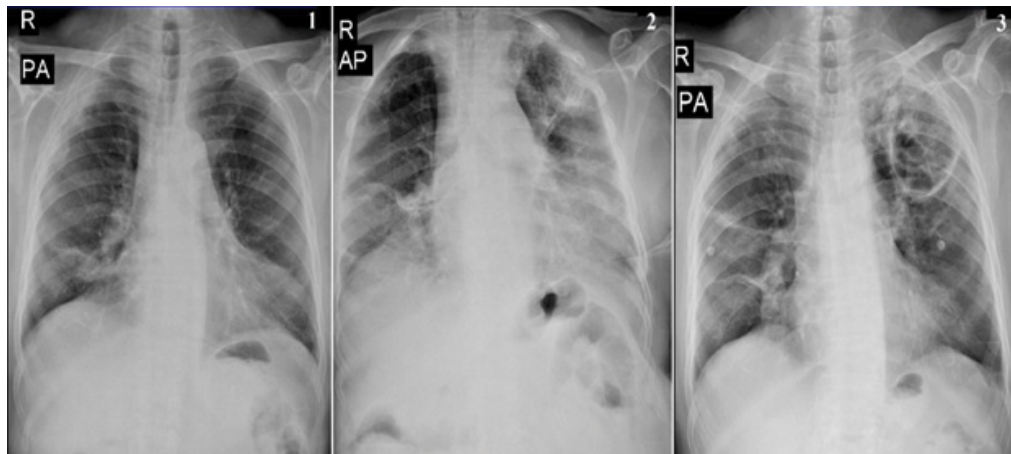


Figure 1: Chest X-rays. (1) Consolidation in the right middle lobe, (2) In spite of lack of technical quality (incomplete inspiration and lower dose of x-ray than usual, mostly related to patient incoherence), the prominent findings are: the consolidation remains in the right middle lobe, alongside with the new consolidation in the upper and lower lobe left lung. Also costophrenic angel is not sharp, (3) Thick wall cavitory lesion in left upper lobe.

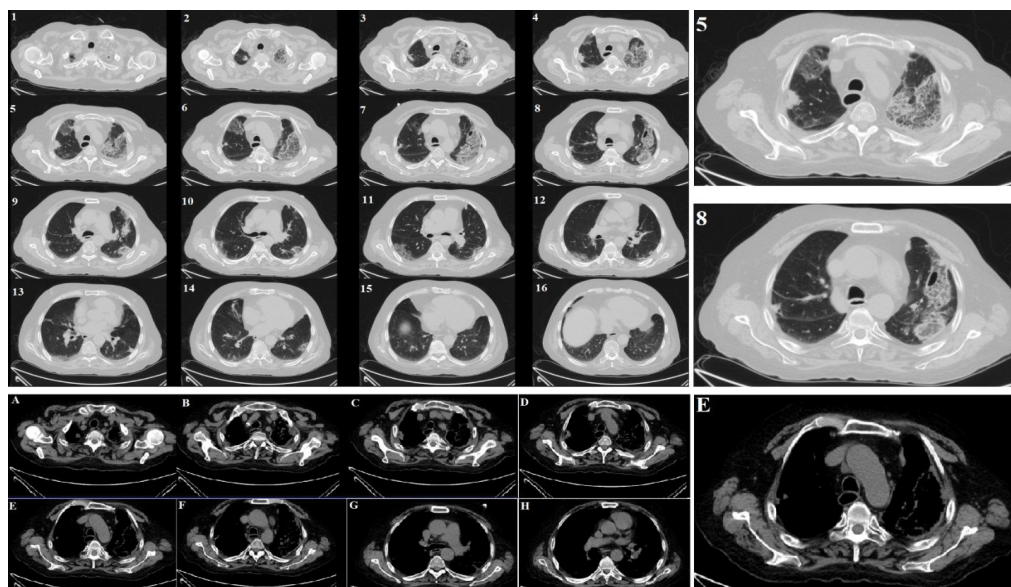


Figure 2: Computed topography of chest. Image 1-16 is parenchymal view; and. A-H is mediastinal view. Image 5 shows bilateral patchy consolidation, more prominent in the left upper lobe. Also, there are some areas of ground glass opacities. In some area the consolidations are very dense, resembling micro nodules. In section 8, we can see a hyperlucent area, which is in favour of starting necrosis and cavitation. In mediastinal view, there is no sign of significant adenopathy. Cardiac and vessels size are normal. Only pathologic finding is disuse dilation of the oesophagus (image 8) from upper to lower portion of it. Also, there is no sign of effusion.

*Corresponding author: Mahdi Hosseini, Department of Internal Medicine, Kerman University of Medical Sciences, Kerman, Iran, Tel: + 0098 913 353 3690; E-mail: drsmhb@gmail.com

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Figure 3: Bronchoscopy results showed a diffuse bilateral mucopurulent secretion, without any endobronchial lesion. The broncho alveolar lavage study showed that the specimen was negative for *Mycobacterium tuberculosis* (BK) and malignancy.

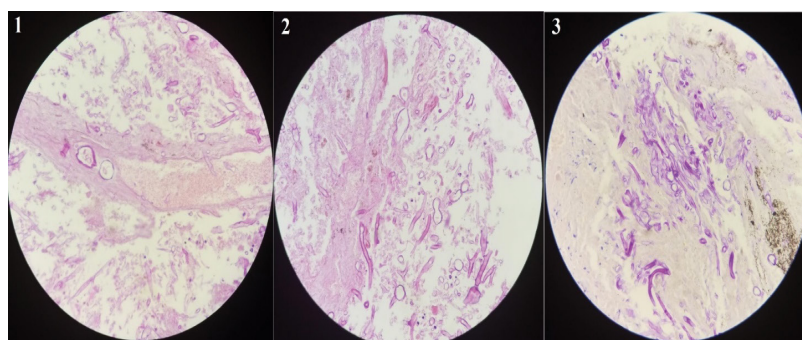


Figure 4: Mucormycosis right angel branching hyphae.

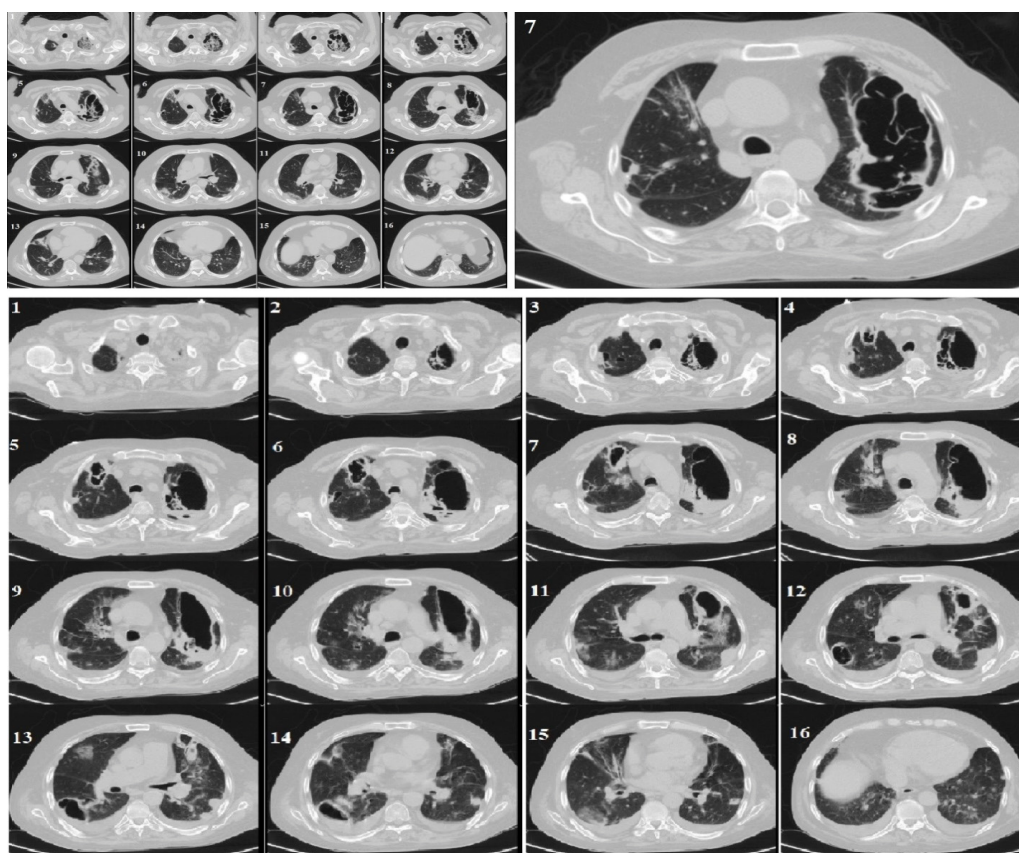


Figure 5: Computed topography of chest. Above images showed large necrotic and cavitation in left upper lobe. This cavity has the thick wall, irregular border and internal septation, but without air-fluid level, all inconsistent with necrotizing lesion. Below images (taken few weeks later) showed diffuse cavitary lesion in both lungs and some degree of bi-lateral pleural effusion develops.

Clinical Image

Case Report: A 65-years-old man, occupied as framer and stock-man, living in rural area of Kerman, Iran, presented with chest pain (pleuritic and diffuse in both hemi-thorax), productive cough (without haemoptysis), fatigue, night sweats and weight loss from a month ago. He had no past medical history. Family history was negative. He was not cigarette smoker and opium or alcohol addict. He had no recent travel history. On physical examination, he had fever about 38°C and oxygen saturation about 90%. Lung auscultation revealed diffuse bilateral crackle. Routine laboratory data were all normal except for a mild leukocytosis. Chest X-ray (CXR) was taken (Figure 1). Chest Computed Topography (CT) was performed (Figure 2). Bronchoscopy and Trans-Bronchial Lung Biopsy (TBLB) (Figure 3) were done; unfortunately, before preparation of results of TBLB, due to patient deteriorated condition, we urged to reassess him with CXR (Figure 1-2).

Keywords: Invasive cavitary; Pulmonary lesion; Mucormycosis; Immunocompetent

Discussion

After chest CT, primary diagnosis was necrotizing pneumonia; therefore, *Vancomycin*, *Meropenem* and *Levofloxacin* prescribed. TBLB pathology (Figure 4) revealed Mucormycosis as diagnosis; therefore, therapy changed to Linezolid, Colomycin and liposomal Amphotericin B. Evaluation for any underlying disease (especially immunosuppression state), complete rheumatologic panel and viral markers for hepatitis and HIV are all negative. Due to deterioration of patient condition gradually, we urged to reassess with chest CT, which showed progression of cavitary lesions (Figure 5). Lastly, even with appropriate therapy, disease progresses gradually; disseminated intravascular coagulation was occurred; and, unfortunately, patient died after about 2 months.

Declaration of Interests

The authors declare that they have no competing interests.