

Isolated pulmonary mucormycosis

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DESCRIPTION

An obese woman aged 70 years with a history of chronic persistent asthma and diabetes mellitus presented with acute exacerbation and respiratory failure. A chest X-ray and CT scan revealed patchy infiltrates on the right lung along with right hilar and upper lobe masses suggestive of malignancy (figure 1). Bronchoscopy was performed 7 days later after control of her symptoms with nebulised bronchodilators, intravenous corticosteroids and non-invasive ventilatory support. Bronchoscopy revealed significant bronchomalacia (>50% collapsibility), and masses in the right main stem and right upper lobe bronchi (figure 2 and see online supplementary figure S1). Biopsies revealed filamentous structures with the morphology of *Mucor* spp. invading the bronchial mucosa with no evidence of a malignancy (figure 3 and see online

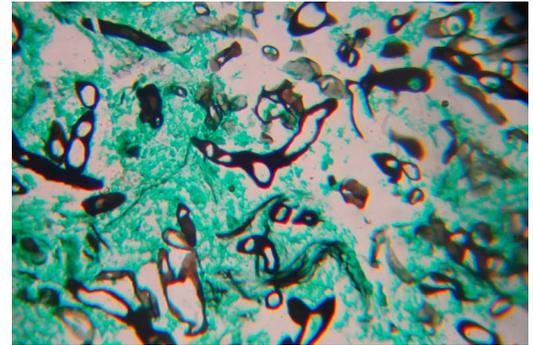


Figure 3 GMS (Grocott's methenamine silver) stain of biopsy. Histology of mucosal biopsy showing dense colonies of broad, aseptate as well as irregular branching filamentous hyphae-zygomycetes (mucormycosis) group in a necrotic background.

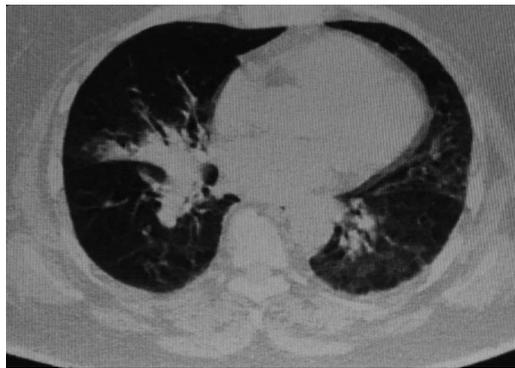


Figure 1 CT chest shows right hilar lesion with associated subsegmental collapse-consolidation.



Figure 2 Bronchoscopy showing an intraluminal vascular mass-like lesion in the right main stem bronchus that bled on touch.

supplementary figure S2). The organism did not grow on culture for species identification. CT of sinuses and brain revealed no concomitant nasal, sinus, orbital or cerebral involvement. Treatment was with liposomal amphotericin B. She was deemed to be high risk for pneumonectomy because of poor respiratory reserve. Repeat bronchoscopy after 7 weeks of treatment revealed no significant change in the bronchoscopic appearances and repeat biopsy showed the same histology with no malignancy. One week later, she succumbed to sudden massive haemoptysis.

Among the classic risk factors for mucormycosis in the immunocompetent, this patient had uncontrolled diabetic status but without ketoacidosis and prolonged corticosteroid therapy for intractable asthma.¹ Isolated pulmonary mucormycosis is extremely rare and carries a poorer prognosis than rhino-orbito-cerebral disease. A predominantly right main stem bronchial disease and ongoing respiratory failure precluded surgical treatment. In our case, mucormycosis mimicked a malignant lesion bronchoscopically.

Learning points

- Isolated pulmonary mucormycosis, although rare, should be considered as a differential diagnosis of lung masses in the context of risk factors.
- Isolated pulmonary mucormycosis is said to carry a poor prognosis without surgery,¹ and this appears to be borne out in our case where sustained medical treatment alone proved ineffective to change the clinical course.



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Contributors RKM is the corresponding author and involved in all stages, preparing and final correction of the manuscript and all documents. VM is responsible for collection of data, editing and online submission process. MS is responsible for preparing the draft manuscript and collection of data. RAK is responsible for reporting the histology slides, and providing these slides as per manuscript.

Competing interests None declared.

Patient consent Obtained.

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