

ID: 167

Educational Abstract

Topics: Academics, Thoracic/Chest Imaging

Keywords: immunocompromised, fungal, Invasive Aspergillosis, ABPA

The Different Facets Of Aspergillosis In Respiratory Tract And Paranasal sinuses : A Clinicoradiological Spectrum

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Learning Objectives :

To study the spectrum of imaging findings of aspergillus infection of the respiratory tract and paranasal sinuses on computed tomography scan

Background :

Aspergillus is a saprophytic fungus , most commonly causing infection of the lungs and the paranasal sinuses The clinicoradiological spectrum of the infection may range from asymptomatic colonization of the respiratory tract to fatal infection in the immunocompromised. Classically, they have been divided into invasive, semi invasive, non invasive and allergic forms.

Procedure and Imaging findings :

Invasive fungal aspergillosis is a relatively common and serious infection in the immunocompromised patients. Chest radiograph followed by computed tomography of chest and PNS was performed. Computed tomography aids in its diagnosis as well as prognostication based on characteristic findings including CT halo sign, hypodense sign and cavitation. On the other end of the spectrum, allergic aspergillosis, a mimicker of steroid dependent asthma, is seen in patients with overactive immune system and may be recognised by central bronchiectasis and mucoid impaction within the bronchioles. Semi invasive aspergillosis is seen in patients with mild immunocompromise and commonly presents as chronic necrotizing pneumonia. Mycetoma, or saprophytic aspergillosis is seen in cases of pre existing lung disease causing non invasive colonization of preformed cavities with the fungal hyphae. Fungal infection of the paranasal sinus may present as both invasive infection with bony destruction and non invasive mucosal thickening and polyposis.

Conclusion :

Aspergillosis of lungs and PNS may be diagnosed by their clinicoradiological appearances using a pattern recognition approach.