Received: 2015.02.25
Accepted: 2015.03.12
Published: 2015.05.25

Authors' Contribution:

- A** Study Design
- B** Data Collection
- C** Statistical Analysis
- D** Data Interpretation
- E** Manuscript Preparation
- F** Literature Search
- G** Funds Collection

MeSH Keywords:

In Response to the Article “Computed Tomography Features of Pulmonary Nocardiosis in Immunocompromised and Immunocompetent Patients”; Pol J Radiol, 2015; 80: 13-17

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Immunocompetence • Immunocompromised Host • Multidetector Computed Tomography • Nocardia Infections

PDF file:

<http://www.polradiol.com/abstract/index/idArt/893941>

Dear Editor,

The article by Mehrian P. et al. [1] on CT features of pulmonary nocardiosis in immunocompromised and immunocompetent patients was quite informative and made an interesting reading.

Nocardiosis is an uncommon infection that occurs primarily in the immunocompromised patients, especially in patients with defective cell-mediated immunity [2]. Less commonly it may also be encountered in immunocompetent hosts. However, its incidence is rising probably due to the advent of improved and advanced laboratory detection methods and also due to the growing number of immunosuppressed patients. The incidence of nocardiosis ranges from 0.7% to 3.5% in solid organ transplant recipients [3]; whereas its incidence in patients infected with human immunodeficiency virus (HIV) is decreasing probably due to effective medical therapy.

CT features of nocardiosis are highly variable, with the most common findings on chest CT being consolidation, nodules which are often cavitating, pleural involvement in the form of thickening and effusions, and extension to the chest wall resulting in formation of an abscess or phlegmon [1,2,4]. Other less common features which have also been described include bronchiectasis, ground glass haze with superimposed septal thickening [2]. Herein are present two cases of pulmonary nocardiosis, one in an immunocompromised and one in an immunocompetent patient,

highlighting the variable and non-specific nature of CT findings in this condition.

A 24-year-old male who was a kidney transplant recipient, presented with complaints of cough with expectoration and fever. Based on the clinical suspicion of an opportunistic infection, a CT scan of the thorax (Figure 1A–1C) was carried out, which revealed cavitary nodules with multiple small satellite nodules in the upper lobes of both lungs. Pulmonary nocardiosis was diagnosed with a CT-guided biopsy.

Figure 2 shows a CT picture of a 50-year-old man with COPD (chronic obstructive pulmonary disease) with no history of corticosteroid intake. He presented with increased cough for the past several months with fever for the last few weeks. There was no history of weight loss. Intradermal tuberculin test was negative and the sputum was sterile. Chest radiograph showed multiple nodular opacities in the bilateral upper zones along with the presence of a cavity in the upper zone of the right lung. These findings were confirmed on CT which also revealed a patch of ground glass haziness in the middle lobe of the right lung and bilateral irregular pleural thickening. Pulmonary nocardiosis was diagnosed with a CT-guided biopsy.

To conclude, although the CT features of pulmonary nocardiosis are nonspecific and can mimic other infections and tumors, familiarity with nocardiosis and its CT findings may help the radiologist/physician in suggesting the diagnosis when it is not suspected clinically.

Figure 1. A 24-year-old male, kidney transplant recipient, with pulmonary nocardiosis. Axial (A), coronal (B) and sagittal (C) CT images showing cavitary nodules with multiple satellite nodules in the upper lobes of both lungs. (Sagittal image is of the right lung).

References:

1. Mehrian P, Esfandiari E, Karimi MA, Memari B: Computed tomography features of pulmonary nocardiosis in immunocompromised and immunocompetent patients. *Pol J Radiol*, 2015; 80: 13-17
2. Kanne JP, Yandow DR, Mohammed TL, Meyer CA: CT findings of pulmonary nocardiosis. *Am J Roentgenol*, 2011; 197: W266-72
3. Clark NM: AST infectious diseases community of practice. Nocardia in solid organ transplant recipients. *Am J Transplant*, 2009; 9: S70-77
4. Yoon HK, Im JG, Ahn JM, Han MC: Pulmonary nocardiosis: CT findings. *J Comput Assist Tomogr*, 1995; 19: 52-55

Figure 2. A 50-year-old man with COPD presenting with gradually increasing chronic cough and fever. Axial CT chest image depicting multiple nodular opacities in bilateral upper lobes along with the presence of a cavity in the right upper lobe.