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Editorial

# The Importance of Case Reports in Medical Education

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Case reports have a great impact on medical education; not only for those who read interesting cases and learn from them but also for those who prepare the reports as they can practice scholarly activities and scientific writing. Case reports should not always describe rare presentation of rare diseases but presenting the common presentation of rare diseases as well rare presentation of common diseases have valuable educational impact. In fact, the latter is more practical for the readers and can help with daily management of patients. The most important focus of a case report should be conveying one or two key teaching points to the readers. Art of scientific writing and clear communication is an essence in writing a case report. Case reports will help clinicians in diagnosis and management of similar cases during their career.

Here, my colleagues and I are presenting a patient with *Mycobacterium avium* masquerading as Tuberculosis with some important take home messages for clinicians. We will demonstrate how a simple case can influence medical management and diagnosis.

A 70-year-old gentleman, with history of heavy smoking, homelessness, and incarceration, presented with worsening of a chronic productive cough for two years and generalized weakness for the last two weeks. On presentation, he was cachectic and had bilateral wheezing. His WBC was 9.2 x $10^9$/L. Initial chest x-ray showed a large cavity in the right upper (RU) lobe (Figure 1A). Chest CT scan confirmed a cavitary lesion in the RU lobe with consolidation and cavitation in the lower and the middle lobes, plus mediastinal lymphadenopathy and emphysema (Figure 1B). Sputum smear was 4+ for acid-fast bacilli (AFB). The patient was subsequently started on Isoniazid, Rifampin, Ethambutol, and Pyrazinamide. He improved clinically and got discharged to a long-term facility. Interestingly, sputum culture showed *Mycobacterium avium* complex (MAC), so the treatment was switched to Ethambutol and Clarithromycin. After 1month, CXR did not change and respiratory cultures remained positive. After 2 months, patient developed acute respiratory distress syndrome (ARDS) and was intubated (Figure 2).

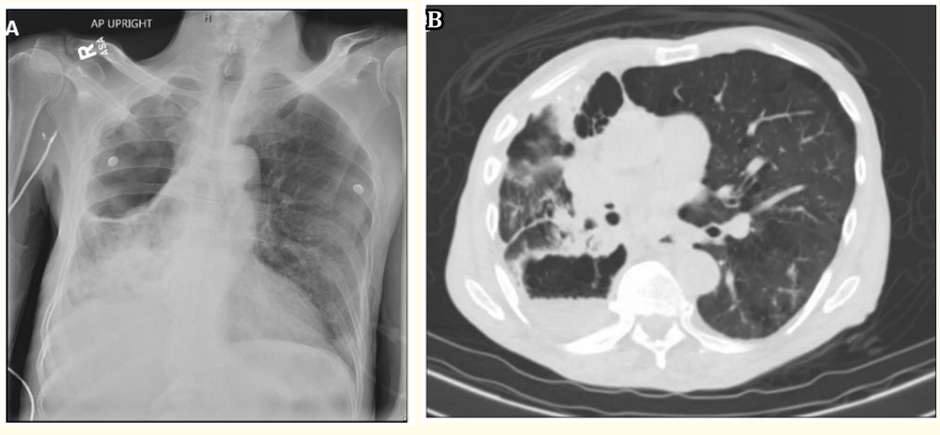


***Figure 1:*** *A) Antro-posterior chest x-ray showing a large cavity in the right upper (RU) lobe. B) CT scan of thorax showing a cavitary lesion in the RU lobe with consolidation and cavitation in the lower and the middle lobes, plus mediastinal lymphadenopathy and emphysema.*

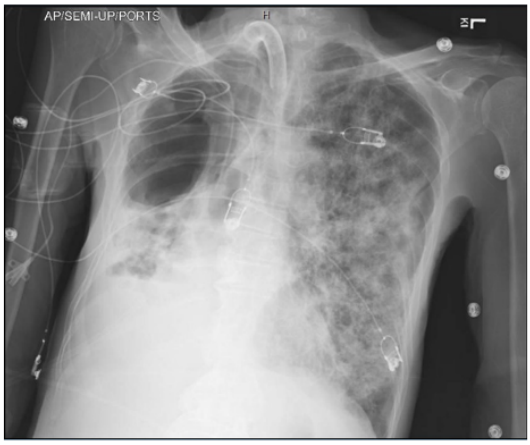


***Figure 2:*** *Antro-posterior chest x-ray of the same patient after 2 months. Large cavity still present and patient developed acute respiratory distress syndrome. Endotracheal tube can be observed with the tip about 3 cm above carina.*

Prevalence and incidence of nontuberculous mycobacteria (NTM) is increasing worldwide. There are currently about 180 species of NTM as compared to < 50 in 40 years ago [1]. MAC is the most common nontuberculous mycobacteria (NTM) causing pneumonia [2]. Pulmonary MAC usually affects older nonsmoking white women [3]. Diagnosis lags about 5 years from onset of symptoms [2]. Bronchiectasis and chronic obstructive pulmonary disease are the major predisposing factors for MAC [2]. Here are the take home messages of this case:

Tuberculosis and NTM can have similar presentations with cavitary lung lesion and AFB+, but differentiation is crucial as they have different management. Unlike tuberculosis, NTM does not require isolation. It is rarely necessary to initiate treatment on an emergent basis before the organism is identified and susceptibility to Clarithromycin is confirmed. For pulmonary MAC, thrice-weekly administration of macrolides or Rifamycin and Ethambutol has been successful. Therapy should be continued for at least 12 months after culture becomes negative [2,3].

## Bibliography

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