

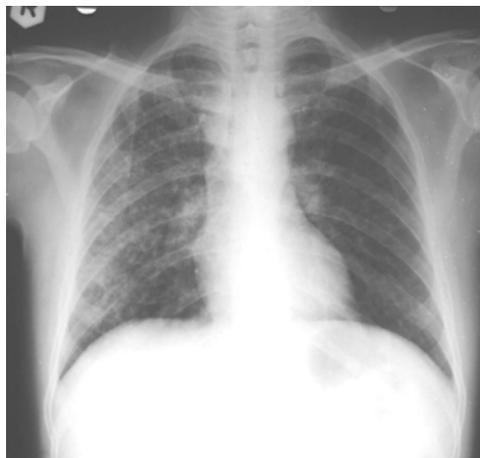
A YOUNG MAN WITH CHRONIC COUGH

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A 30-year-old male patient presented with persistent cough and weight loss for 6 months duration. His ESR is 120 mm/hour. Six months ago he was tested positive for human immunodeficiency virus (HIV) type 1. His chest radiograph is shown below:



Question

1. Describe the findings in the chest radiograph.
2. What is your diagnosis?
3. List three other investigations which are helpful in diagnosis.

Answer

1. The chest radiograph shows bilateral multiple small opacities of both lungs, predominantly on the left side. The appearance of the chest radiograph is consistent with military tuberculosis. The term "miliary" describes the appearance of very small nodules throughout the lungs in the plain radiograph that look like millet seeds.

2. The diagnosis is AIDS with military tuberculosis. Patients who are infected with HIV are at risk of tuberculosis.^{1,2} According to the current diagnostic criteria, a HIV positive patient who has pulmonary tuberculosis or extrapulmonary tuberculosis is sufficient to diagnose as AIDS.³ CD4 T-lymphocytes play an important role in defense against tuberculosis. The CD4 depletion in HIV infection is the major reasons for the development and progression of tuberculosis.⁴
3. Investigations which are helpful for assisting the diagnosis are: sputum direct smear for acid fast bacilli (AFB), sputum culture for AFB (results usually positive only after 6-8 weeks) and Mantoux test. Mantoux reading after 72 hours with the measurement of 10 mm above is considered significant.⁵ In this particular patient, his sputum direct smear for AFB was positive 4+ and his Mantoux test measured 35 mm.

References

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4. Fahey JL, Taylor JMG, Detels R. The prognostic value of cellular and serologic markers in infection with human immunodeficiency virus type 1. *N Engl J Med*. 1990;322(3):166-72 [[PubMed](#)]
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