

SUGGESTIVE CRITERIA FOR PULMONARY TB IN DEVELOPING COUNTRIES

ENRICO RINO BREGANI

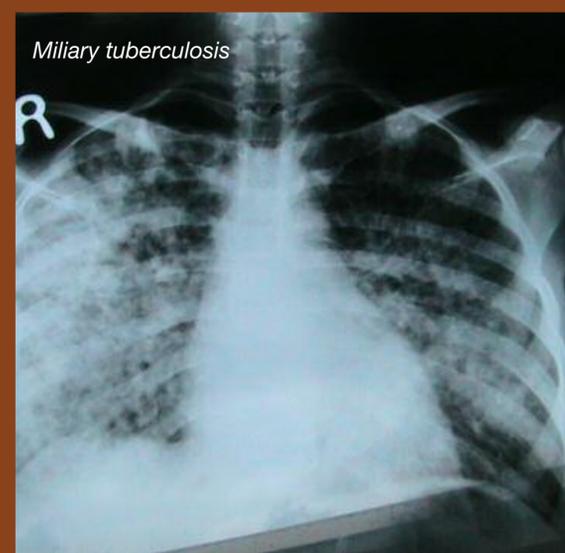
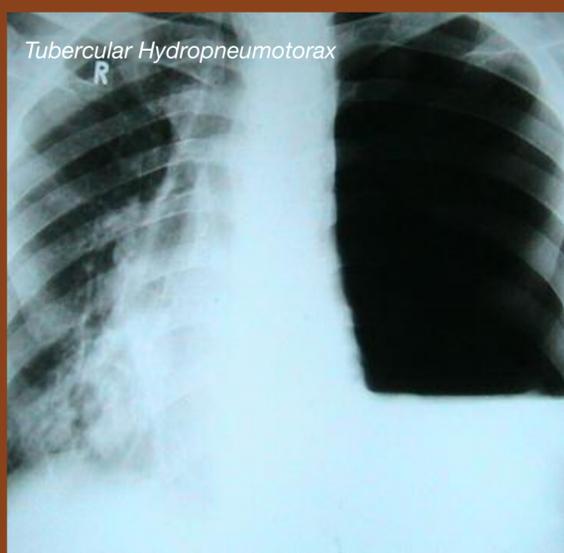
St. Luke Catholic hospital, Wolisso, Ethiopia; Doctors with Africa CUAMM, Padova, Italy, Emergency Medicine Division, Fondazione Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, IRCCS, Milano, Italy

MARIANNA BETTINZOLI

University of Brescia, Italy

VALTER MONZANI

Emergency Medicine Division, Fondazione Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, IRCCS, Milano, Italy



Objectives

To identify simple and reproducible clinical and laboratory criteria related to pulmonary TB in low resources health facilities.

Methods

117 patients (52 males, 75 females, mean age 31 years, range 10-75) in which diagnosis of TB was confirmed by sputum analysis or by typical chest X-ray, were examined in the period from April 2006 to September 2008 in our hospital in rural Ethiopia.

A questionnaire, a physical examination and simple laboratory examinations were performed, including ESR, Hb, WBC total and differential count.

Results

Patients' history showed cough for more than 99% of patients, lasting for an average of 3,2 months (1 week to 2 years),

96.6% of which was productive; sputum was mucoid in 55%, and bloody or purulent in 22% each, weight loss was complained by 87% of patients, a previous contact with TB patients was reported by 25% of cases, sharp chest pain was present in 81%, sweating in 88%, weakness in 95%, fever in 84%, and dyspnea in 77%; HIV rapid test was performed in 32 patients, resulting positive in 5 (15.6%).

Clinical data show low mean BMI (16.2, 10-23), low BP values (mean systolic BP 99 mm/Hg, 70-180; mean diastolic BP 64 mm/Hg, 40-110), tachycardia (mean HR 104 bpm, 64-150). Standard laboratory examinations showed significant ESR increase (mean 69, 4-148), normal mean WBC count (7.2 cells/mm³, 2.6-13.5) and neutrophil predominance in all samples, normocytic anaemia (mean Hb 9.5 g/dl, 4.4-14.8; mean MCV 83) and normal mean platelets count (313,000 x 10³, 145,000-508,000).

Conclusions

Patients living in developing countries can be considered at high risk of pulmonary TB in case of long lasting cough (> 1 month), dyspnea, chest pain, weight loss, fever, weakness and night sweats; typical physical examination shows emaciated condition, with low BP, tachycardia and low BMI; simple laboratory examinations suggestive for TB was found to be high ESR values and normocytic anaemia. Absence of known TB contact and bloody sputum are not significant to rule out TB, and WBC total and differential count are not useful for the diagnosis.

These selected patients could be sent to perform deeper investigations for tuberculosis, as concentration techniques of sputum, cultural methods, or molecular biology in case of negative results with standard diagnostic procedures.

