



SKIPPING STEPS IN TUBERCULOSIS

RAŠETA M.¹, Posavec A.², Begovac M.³, Štajduhar A.⁴, Miculinić N.⁴, Popović-Grle S.⁴, Pavliša G.⁴

¹ OB "Tomislav Bardek", Koprivnica, Croatia
Pulmologija

² OB "Ivo Pedišić", Sisak, Croatia
Pulmologija

³ Dom zdravlja Zagreb Zapad, Zagreb, Croatia
Dom zdravlja

⁴ Klinika za plućne bolesti Jordanovac, Zagreb, Croatia
Odjel za alergijske i opstruktivne plućne bolesti

Background:

Current statistics estimate that 1/3 of planet population is infected with *Mycobacterium tuberculosis*. In 2022., 7,5 million of people developed disease and 1,5 million of individuals died of tuberculosis (TB). TB should always be suspected as a cause of pulmonary or extrapulmonary disease in context of symptoms (cough>3 weeks, lymphadenopathy, fever, weight loss) and epidemiologic history (prior TB infection/disease, known or possible TB exposure, traveling/living in area where TB is endemic).

Conclusion:



Definitive diagnosis of tuberculosis infection is made by isolation of *M. tuberculosis* in culture of tissue or fluids. When pulmonary TB is suspected, standard guidelines recommend sputum specimens should be submitted for laboratory testing, such as smear microscopy, culture and nucleic acid amplification. Laboratory analysis should be performed on at least two sputum specimens, collected over consecutive days. This non-invasive and widely available diagnostic procedure can make diagnosis faster and avoid unnecessary diagnostic tests.

Case:

74 year old male with history of smoking (35 p/y) presented with symptom of productive morning cough. He was treated for pulmonary tuberculosis in 1969. CT scan revealed upper lobe emphysema, calcified and spiculated nodule in apicoposterior segment of left upper lobe (5mm) with adjacent satellite nodules, deformed bronchi and a nodule in posterior right upper lobe (4mm) with thick nearby septa. Bronchoscopy with radial probe endobronchial ultrasound biopsy of left upper lobe (LB1 i LB2) was performed. A histological examination showed anthracosis and mononuclear infiltrates while microbiological analysis of bronchoalveolar lavage isolated *Pseudomonas aeruginosa* 10^5 CFU. PET/CT showed [^{18}F]-fluorodeoxyglucose uptake in left upper lobe nodule and adjacent nodules of maximum standardized uptake value (SUVmax) 6,7 and in right upper lobe of SUVmax 4. On the same visit three samples of morning sputum were collected (examination went through Xpert MTB/RIF Ultra assay, sputum smear microscopy and cultures). Patient also underwent transthoracic biopsy of upper left lobe nodule. Histological examination described necrotic tissue with hyalinized connective tissue and central cellular component (dominantly lymphocytic). Finally *Mycobacterium tuberculosis* was identified by sputum culture and also by a culture of the biopsied material and tuberculosis treatment was started.