

COUGH BACILLARY LOAD IN PULMONARY TUBERCULOSIS PATIENTS

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Resume:

Several studies using smears and cultures have shown that patients with cavitary pulmonary tuberculosis (TB) have higher bacterial loads in their sputum. However, the relation between the extent of disease and bacillar load in cough was not studied until the presente moment. This study aims to compare the bacillary load in cough, extensions of the disease and presence of cavitation in patients with pulmonary TB. We enrolled 40 patients in four cities of the Vitória's metropolitan region, representing all the new cases of pulmonar TB detected by smear microscopy. All elegible patients were submitted to chest X-ray and to the collection of cough aerosol by the system Cough Aerosol Sampling System (CASS). We isolated culturable *M. tuberculosis* from the aerosol generated by coughing in 28 (70%) subjects, while 12 (30%) subjects produced culture-negative aerosols. Among the subjects with culture-positive aerosols, 17 (60,7%) subjects generated aerosols with more than 10 cfu isolated (high aerosol group) and 11 (39,3%) subjects generated aerosols with 1 to 10 cfu isolated (low aerosol group). Within the high aerosol group, 14 (82,35%) subjects presented cavitary disease and only 3 (17,65%) didn't presented cavities on chest X-ray. Similar to that, within the low aerosol group, cavitary disease was observed in 9 (81,8%) subjects and in only 2 (18,2%) it wasn't observed. Among the 12 subjects with culture-negative aerosols, 9 (75%) subjects presented cavities and 3 (25%) didn't. 12 subjects (70,6%) from the high aerosol group had advanced disease and 5 (29,4%) had moderate advanced disease. Similar results was found in low aerosol group, 8 (72,2%) had advanced disease, 2 (12,2%) had moderate advanced disease and only 1 (9,1%) had minimum disease. Among the 12 subjects with culture-negative aerosols, 8 (66,7%) subjects had advanced disease, 2 (16,7%) had moderate advanced disease and 2 (16,7%) had minimum disease. We found 26 (65%) cases with culture positive in stage 4 (3.3-2.1 µm) of the Andersen cascade with 668 (39,8%) cfu isolate. 82,14% of the culture-positive aerosol group had cavitation whereas only 75% had cavitation in the culture-negative aerosols group. Advanced disease was found in 71,4% and 66,7% in culture-positive aerosols and culture-negative aerosols respectively.

Palavras-chaves: cough bacillary load, *M. tuberculosis*, pulmonary tuberculosis

Agência de Fomentos: FAPES