11. CHALLENGES IN MANAGING PSEUDOMONAS AERUGINOSA INFECTION IN A CASE OF NON-CYSTIC FIBROSIS BRONCHIECTASIS

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Introduction. Patients with bronchiectasis, due to recurrent respiratory infections and permanent dilatation of the bronchi, are frequently colonized with potentially pathogenic microorganisms. P. aeruginosa chronic infection triggers airways inflammation and destruction that perpetuate the vicious cycle and lead to disease progression.

Case presentation. A 38-year-old woman was referred to the pulmonary clinic at the age of 34 with a history of frequent respiratory infections during her childhood and recurrent pneumonias. She had symptoms of chronic cough, progressive dyspnea on exertion and a big amount of daily purulent sputum (120-200 ml) for more than 5 years. She has complained for three to five exacerbations per year for the last 3 years and didn't use to perform daily chest physiotherapy. Evaluation of the radiological archive (chest X-Rays performed from the age of 18 till present) demonstrated progression of the bronchiectasis from a small number of tubular bronchiectasis in the lower lung fields till extensive saccular bronchiectasis in all the lobes. The first HRCT was performed at the age of 34, when she had experienced the first episode of severe hemoptysis, and severe bilateral bronchiectasis were identified, associated with emphysema, peribronchial thickening, air-fluid level and collapsed pulmonary segments. The patient was evaluated for underlying etiology, such as congenital disease, postinfection, immune dysfunction, cystic fibrosis, primary ciliary dyskinesia, ABPA, NTM, TB or autoimmune disease but no one was confirmed and idiopathic etiology was accepted. Sputum culture showed persistent infection with P. aeruginosa (PA) despite several attempts of eradication treatment for chronic PA infection with fluoroquinolones and cephalosporines being tried. At the last admission a mucoid type of PA colonies resistant to ceftazidime were identified, and the exacerbation has been managed with intravenous fluoroquinolones.

Discussion. Frequent exacerbations need a prompt review of all aspects of the bronchiectasis management including reviewing of antibacterial treatment correlated with sputum microbiology. In our case the patient neglected airway clearance regime and adequate antibacterial treatment during exacerbations, which contributed to rapid deterioration of the lung function and severe pulmonary architecture distortion.

Conclusion. Chronic PA infection in patients with bronchiectasis is associated with a more severe disease, mainly characterized by frequent exacerbations, severe dyspnea and significantly higher radiological scores.