Title: Role of stenotrophomonas maltophilia infection in CF pulmonary exacerbations

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Body: Background and aim: Recently a new group of Gram-negative bacilli emerged among well documented germs involved in CF exacerbations. Stenotrophomonas maltophilia (SM), an aerobic Gram-negative opportunistic bacillus generates treatment issues due to high antimicrobial resistance. SM infection produces pulmonary function decline mostly in high-risk patients. The aim of our study was to describe the impact of SM infection in a pediatric regional center. Material and methods: Two years retrospective study was conducted for evaluating impact of SM pulmonary infection. We analyzed clinical data, cough-swab or sputum cultures, dynamic of pulmonary function tests and x-ray aspects. SM severe exacerbations were hospitalized and treated according to CF guides. Results: We evaluated a cohort of 50 patients during 322 visits, aged between 3 months and 33 years, with male predominance (62%). 5 of them (10%) were SM positive: 3 patients with acute exacerbation and 2 with chronic infection (>3 distinct episodes of positive cultures). Age range of patients was 8 months to 30 years. Sensitivity-guided treatment had favorable outcome in 4(80%) patients. An adult with a severe pulmonary impairment, chronic infection with Pseudomonas Aeruginosa [PA] and severe malnutrition, had a modest decline in FEV1 after cure. Lung-functional impairment of SM was significantly lower than in PA infection. Conclusion: 1. SM exacerbations can be documented in ∼10% of CF patients in the era of anti-pseudomonal prophylaxis. 2. Prognostic features of SM episodes are better than those of PA infection. 3. SM infection has a poor prognostic when associated with other risk factors (low BMI, baseline low-FEV1, co-infections).