European Respiratory Society
Annual Congress 2012

Abstract Number: 2349

Publication Number: P2527

Abstract Group: 10.1. Respiratory Infections

Keyword 1: Congenital lesion/malformation **Keyword 2:** Infections **Keyword 3:** Bacteria

Title: Bacterial biofilms in bronchiectasis of primary ciliary dyskinesia (PCD) in comparison with cystic fibrosis (CF)

Dr. Dirk 16635 Theegarten dirk.theegarten@uk-essen.de MD [1], Ms. Judith 16636 Kikhney judith.kikney@charite.de [2], Ms. Annett 16637 Petrich annett.petrich@charite.de [2], Dr. Urte 16638 Sommerwerck urte.sommerwerck@ruhrlandklinik.uk-essen.de MD [3], Dr. Stefan 16639 Welter stefan.welter@ruhrlandklinik.uk-essen.de MD [4], Dr. Olaf 16640 Anhenn olaf.anhenn@ruhrlandklinik.uk-essen.de MD [1,3] and Dr. Annette 16641 Moter annette.moter@charite.de MD [2]. [1] Institute of Pathology and Neuropathology, University Hospital, Essen, Germany, D-45122 ; [2] Institute of Microbiology and Hygiene, Universitaetsmedizin Charite, Berlin, Germany, D-10117 ; [3] Department of Pneumology - Lung Transplantation, Ruhrlandklinik - University Hospital Essen, Germany, D-45239 and [4] Department of Thoracic Surgery, Ruhrlandklinik - University Hospital Essen, Germany, D-45239 .

Body: Background: Bronchiectasis (B.) is induced by different mechanisms, one of these is primary ciliary dyskinesia (PCD). Genetic aberrations lead to a lack of mucociliary clearance. The bacterial biofilm in B. of patients with PCD in comparison to CF was studied by fluorescence in situ hybridisation (FISH). Material and Methods: An explant and 2 middle lobe resections of 3 patients (age between 5 and 50 years) were investigated using conventional histology. Diagnosis of PCD was confirmed by transmission electron microscopy. For comparison 10 explants of CF patients were available. Of all cases, at least 2 locations were studied by FISH using a pan-bacterial and a Pseudomonas (Ps.) specific probe. Results: Histology revealed typical B. In all 3 PCD cases no bacterial biofilms were detected by FISH, although in at least one case Ps. was detected by culture previously. In comparison all CF cases showed colonization with Ps. Conclusions: Significant differences exist concerning bacterial biofilms in PCD versus CF. This might be of relevance for the clinical practise.