European Respiratory Society
Annual Congress 2012

Abstract Number: 679

Publication Number: P4013

Abstract Group: 6.2. Occupational and Environmental Health

Keyword 1: Interstitial lung disease **Keyword 2:** Environment **Keyword 3:** Occupation

Title: Farmer's lung – How much farming is required? A quantitative re-evaluation of eight cases of hypersensitivity pneumonitis attributed to indoor mould exposure

Prof. Henrik A. 5350 Kolstad henkol@rm.dk MD [1], Dr. Zuzana 5351 Dornonville de la Cour zuzadorn@rm.dk MD [1], Mr. Simon 5352 Skov skovsimon@gmail.com [2], Dr. Tine 5353 Halsen Malling t.malling@rn.dk MD [3], Dr. Elisabeth 5354 Bendstrup karbends@rm.dk MD [4] and Dr. Vivi 5360 Schlünssen VS@MIL.AU.DK MD [5]. [1] Danish Ramazzini Centre, Department of Occupational Medicine, Aarhus University Hospital, Aarhus, Denmark, 8000 ; [2] Forest and Landscape, Faculty of Life Sciences, University of Copenhagen, Denmark, 2000 ; [3] Danish Ramazzini Centre, Department of Occupational Medicine, Aalborg Hospital, Aalborg, Denmark, 9000 ; [4] Department of Respiratory Medicine and Allergology, Aarhus University Hospital, Aarhus, Denmark, 8000 and [5] Danish Ramazzini Centre, School of Public Health, Department of Environmental and Occupational Medicine, Aarhus University, Aarhus, Denmark, 8000 .

Body: Background Hypersensitivity pneumonitis is by definition caused by the inhalation of antigens, but limited quantitative data are available on exposure levels required to cause the disease. Objective To analyse exposure levels for mould spores in patients with clinical findings compatible with hypersensitivity pneumonitis and a history of indoor mould exposure. Methods We report eight consecutive patients diagnosed as hypersensitivity pneumonitis based on symptoms, high resolution computerized tomography, bronchoscopy, IgG findings, and self-reported mould exposure at home or work. Indoor and outdoor air samples from their dwellings or work sites were collected with slit to agar samplers, N6 Anderson samplers, and filter samplers used for quantification of moulds by the Camnea method. The concentration of fungi was calculated and expressed as colony forming units (CFU)/m^3 and total spores/m^3. Results The indoor air concentration of viable fungi was comparable with the outdoor air concentration, while the total spore concentration was moderately increased indoors compared with outdoors but significantly lower than previously measured in documented cases of hypersensitivity pneumonitis among farmers. Conclusion We question if the lung diseases of these patients were caused by mould exposure in their indoor environments and document the need for quantitative exposure measurements when diagnosing hypersensitivity pneumonitis in patients living or working outside environments with well-documented high mould exposure levels.