

European Respiratory Society Annual Congress 2012

Abstract Number: 3475
Publication Number: P3959

Abstract Group: 6.1. Epidemiology

Keyword 1: Allergy **Keyword 2:** Epidemiology **Keyword 3:** No keyword

Title: Levels of cat, grass and mite specific IgE and symptoms on specific exposure

Dr. Mario 18777 Olivieri Mario.Olivieri@univr.it MD ¹, Prof. Joachim 18947 Heinrich heinrich@helmholtz-muenchen.de ³, Prof. Dan 18961 Norbäck dan.norback@medsci.uu.se ⁴, Prof. Simona 18972 Villani svillani@unipv.it ⁵, Prof. Josep M. 28436 Antó jmanto@creal.cat MD ⁶ and Prof. Giuseppe 18780 Verlatto Giuseppe.Verlatto@univr.it MD ². ¹ Unit of Occupational Medicine, University Hospital, Verona, Italy ; ² Unit of Epidemiology & Medical Statistics, Dept. of Public Health & Community Medicine, University of Verona, Italy ; ³ Institute of Epidemiology, GSF-National Research Center for Environment and Health, Neuherberg, Germany ; ⁴ Department of Medical Science/Occupational and Environmental Medicine, Uppsala University, Uppsala, Sweden ; ⁵ Department of Public Health, Neurosciences, Experimental and Legal Medicine, University of Pavia, Italy and ⁶ Centre for Research in Environmental Epidemiology, (CREAL), Barcelona, Spain .

Body: Objective. To investigate the association between specific IgE levels to different allergens and symptoms on specific exposure. Methods. In the frame of the European Community Respiratory Health Survey II specific IgE to cat, timothy grass and house dust mite were assessed in 8409 subjects. Participants were asked whether they presented cough, wheeze, chest tightness, breath shortness, runny or stuffy nose, itchy or watering eyes on exposure to: animals such cats or dogs; trees, grass, flowers, or pollen; a dusty part of the house, or near pillows or duvets. Results. A clear dose-effect relationship was found between IgE levels to cat, grass and mite, respectively, and symptoms on exposure to animals, pollen and dust (Table 1). The relation between mite sensitization and symptoms on dust exposure was less steep. A similar pattern was observed when evaluating the number of symptoms on exposure: the Spearman's rho was, respectively, 0.45, 0.45 and 0.19 when considering the relation between sensitization to cat, grass and mite and number of symptoms on specific exposures. Conclusion. Both the prevalence and the number of allergic symptoms on specific exposure increase with increasing specific IgE levels.

Table 1. Percent prevalence of symptoms on exposure to animals, pollen and dust, respectively, as a function of IgE levels to cat, timothy grass and house dust mite

Specific IgE levels (kU/L)	Symptoms on exposure to animals	Symptoms on exposure to pollen	Symptoms on exposure to dust
<0.35	11 (762/6818)	24 (1622/6624)	28 (1758/6352)
0.35-0.69	41 (76/186)	54 (106/198)	39 (115/296)

0.70-3.49	71 (234/328)	65 (315/488)	45 (208/464)
3.50-17.4	82 (187/227)	87 (455/526)	58 (190/328)
≥ 17.5	82 (68/83)	92 (305/332)	66 (129/196)