European Respiratory Society
Annual Congress 2013

Abstract Number: 557

Publication Number: P416

Abstract Group: 1.1. Clinical Problems

Keyword 1: Bronchiolitis **Keyword 2:** Genetics **Keyword 3:** Chronic disease

Title: Some genetic predisposing factors of chronic postinfectious obliterative bronchiolitis formation

Dr. Ludmila Fiodorovna 5210 Kovaleva kov_lf@mail.ru MD , Prof. Tatjana Evgenievna 5211 Guembitskaja kov_lf@mail.ru MD [1] and Dr. Natalia Anatolievna 5212 Kelembet kov_lf@mail.ru MD [1]. [1] Scientific Research Institute of Pulmonology, Pavlov´s State Medical University, Saint-Petersburg, Russian Federation .

Body: Aim: to analyze polymorphism of GSTM1 and GSTT1 genes in patients with chronic postinfectious obliterative bronchiolitis (OB). "Null genotype" GSTM1 0/0 is responsible for the development of various clinical and functional forms of OB. Gene GSTT1 is expressed in the lung and its protein is included in antioxidant defense of the respiratory tract. Methods. 15 patients with OB (mean age 19,2±3,1 years) were examined. The control group included 69 healthy volunteers, residents of St. Petersburg and the North-West region of Russia at the age from 17 to 35 years. The study was carried out using polymerase chain reaction (PCR) and method of restriction fragment length polymorphism (RFLP). The frequency of "null alleles" genes GSTM1 and GSTT1 in patients with OB and control group was determined. Results. The frequency of homozygotes for the GSTM1 null allele was 1,7 times higher in OB patients as compared with the control group. Analysis of the homozygotes frequency for the null allele GSTT1 gene showed its 2-fold exceeding as compared with the control group. According to the odds ratio the relative risk of developing the disease (OR) in homozygous carriers of null allele GSTT1 is increased 2-fold (OR = 2,0), and gene GSTM1 – 1,7-fold (OR = 1,7). Conclusion. These data reveal some aspects of the OB genetics and necessity further study of polymorphism of the genes involved in pathogenesis of the disease.