

Prevention of respiratory diseases

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Association between AB0 blood group system and the occurrence of COPD and asthma

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Epidemiological studies provide proof of existence of genetic factors, including blood group systems, having impact on susceptibility to certain conditions, including asthma and COPD. The purpose of the study was to validate the hypothesis that a relationship exists between AB0 blood group system and the risk of developing asthma and COPD.

The study involved 248 adult patients (85 women and 163 men) median age: 65 y, min-max: 20-95 y, with COPD (71.4%, 177) and asthma (28.6%, 71), where blood group system was determined. A retrospective analysis was conducted of the digital and hardcopy files of patients from the years 2016-2017 that were hospitalized due to asthma and COPD. Data of hospitalized patients was analyzed in terms of cancers with asthma and COPD as co-existing conditions. The most frequent blood group system was A (39.1%, 97). Significant differences were determined between distribution of the 0 and non-0 blood group systems in patients with asthma ($p=0.001$) and COPD ($p<0.001$). More frequent both A and 0 blood group systems were observed in patients with asthma ($p=0.02$) and COPD ($p<0.001$). Another factor important in asthma and COPD occurrence was age