

Abstract**Introduction:**

Asthma is a common disease all over the world, imposing a high social and economic burden. Asthma is a heterogeneous disease of the interaction between genetic and environmental factors. Several factors have been accused for asthma, but their precise role has not precisely defined yet. Risk factors are including genetic, atopy, airway hyper reactivity, race, gender, allergens, smoking, respiratory infections, obesity, early viral infections. Therefore, we decided to know more about the risk factors by this study.

Materials and Methods

This study is a case-control one on 82 individuals (52 patients and 30 healthy controls). Asthmatic patients were selected from lung clinic, by simple tests and ruling out other causes of wheezing. Control group was selected from the attendants to other hospital clinics with no lung disease. A questionnaire was filled for each individual. Also, all the patients in the case group underwent spirometry, and were taken a peripheral blood sample, and the results were listed in the questionnaire. Finally all the data was analyzed by SPSS v16.

Results

82 individuals participated this study, the average age of the case group being 45.54 ± 11.49 and that of the control being 40.57 ± 13.61 ($p=0.089$). Of the case group, 55.8% were female and 44.2% were male and of the control group 43.3% were female and 56.7% were male. In the case group, 98.1% had cough ($p<0.001$), 92.3% had dyspnea ($p<0.001$), 44.2% had asthma history in the first degree family members ($p<0.001$) (or: 11.10, 2.391-51.55) and 61.5% had a history of rhinorrhea ($p=0.000$) (or=46.40, 5.853-367.81). The average WBC count ($p=0.134$), eosinophil count ($p=0.002$) and eosinophil percentage ($p=0.001$) were 7973 ± 2178 /ml, 494 ± 494 /ml and 5.94% respectively at the case group, and 7290 ± 1535 /ml, 187 ± 122 , 2.52% respectively at the control group.

Conclusions

In this study, eosinophil count and percentage in the case group was meaningfully more than the control group. Rhinorrhea and hypersensitivity to odors had the most important associations with asthma and first degree family history was the most important risk factor of asthma.

Keyword: Asthma, Eosinophil