Relationship between pulmonary function tests and clinical findings in patients with delayed complications of sulfur mustard poisoning

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Objectives and introduction: The most common complications of sulfur mustard (SM) poisoning have been observed in the respiratory tracts. Pulmonary function test (PFT) is a useful tool for diagnosis of the obstructive and or restrictive lung diseases and their severities. It was aimed to find out relationships between PFT and clinical manifestations in patients with delayed complications of sulfur mustard poisoning.

Methods and materials: After obtaining the informed consent, veterans with more than disabilities due to SM poisoning and healthy controls were studied. Clinical examination was performed by an experienced chest physician and PFT was done by an experienced technician. Statistical analyses were carried out by means of SPSS.

Results: The mean age of patients was years and mean disability. Triad of chronic cough, dyspnea and expectoration were the most common symptoms which were recorded in and of the patients, respectively, while it was and in control group. Twenty one patients who had the triad symptoms were overweight (BMI>25) and there was a significant correlation (p<0.05) between the two variables. PFT abnormalities were much higher in the patients than in the controls (11.8%). Mixed pattern among the veterans raised significantly with higher disability percentages and there was a significant positive correlation (p<0.05) between them. We also observed a significant reverse correlation (p=0.05) between the disability percentages of the patients and their FEV₁/FVC.

Conclusion: Triad of cough, dyspnea and sputum were the main symptoms and the most impaired PFT was mixed obstructive and restrictive pattern. Correlations between them and BMI were significant.

Keywords: Sulfur mustard, pulmonary function test, delayed complication