Original Paper

The delay effect of sulfur mustard gas on phenotype and plasma alpha-1-antitrypsin activity in war victim patients

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Abstract

Background and Objective: Alpha-1 antitrypsin deficiency is recognized as a etiological base in lung injury. Therefore this study was performed to determine plasma level of alpha-1 antitrypsin in war victims exposed to sulfur mustard gas.

Materials and Methods: This historical cohort study was done on 100 incident was survivors from Sardasht, West of Iran who were exposed to sulfur mustard gas in 1987. Fifty non exposed civilians subjects were selected as control. Phonotype and of alpha-1 antitrypsin and trypsin inhibitory capacity (TIC) were measured.

Results: Phonotype of alpha-1 antitrypsin in patients and control group were normal (MM) and the mean of trypsin inhibitory capacity in patients group was 3.4±0.3 μmol/min/ml which lower than control group 4.2±0.1 μmol/min/ml ($P<0.05$).

Conclusion: This study showed that activity of alpha-1 antitrypsin in patients with lung injuries reduced due to sulfur mustard gas.

Keywords: Alpha-1-antitrypsin, Chimical veterans, Sulfur mustard

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