

Evaluation of Bronchitis Caused by Mustard Gas Weapons in the War Combatants

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Received 2016 December 21; Accepted 2017 February 08.

Abstract

Sulfur mustard (SM) gas was used in the Iran-Iraq war (1981 - 1989) as a vesicant chemical warfare against the Iranian warriors. This alkylating agent with the potential of producing chemical injury in the skin, eyes, and lung, may damage both upper and lower respiratory tract, which in turn can cause different types of sequels such as asthma, bronchiectasis, chronic bronchitis and lung fibrosis. This study was performed on 274 patients with documented history of SM gas exposure. All of the participants complained of respiratory problems. Patients with a positive history of cigarette smoking, respiratory problems before the exposure to SM gas, cardiovascular problems, surgery of the lung, and exposure to occupational toxic chemicals were excluded from the study. Results of all chest HRCTs were evaluated by a radiologist. HRCT findings showed that bronchiectasis involved 53 patients (19.34%) of all cases. Varicose bronchiectasis and cystic bronchiectasis was observed in 10 (18.9%) and 6 cases (11.3%) respectively. Among patients with bronchiectasis, the involvement rate of different lobes was as follows: right upper lobe (RUL) 7.5%, right middle lobe (RML) 11.3%, left upper lobe (LUL) 15.1%, left lower lobe (LLL) 26.4% and right lower lobe (RLL) 39.6%. Findings of chest HRCT demonstrated tubular bronchiectasis was the most frequent type of this disease that involve the chemically injured patients and RLL had been the most frequently involved lobe of the lung with bronchiectasis.

This is an abstract presented in the 33rd Iranian congress of radiology (ICR) and the 15th congress of Iranian radiographic science association (IRSA).