

COMMON HEALTH COMPLAINS AMONG CHEMICAL BOMBARDMENT SURVIVORS IN HALABJA

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ABSTRACT

To investigate the main health outcomes among chemical survivors in Halabja, a Kurdish town in the Iraqi Kurdistan region that bombed with chemical weapons by Iraqi army in 16th of March 1988. This study was carried out between March and October 2000 on forty survivors of this town who were exposed to the warfare agents during the massacre. Clinical investigation and medical reports revealed that all survivors suffered from different health complains included respiratory complains (75%), ophthalmological complains (57.5%), and dermatological complains (50%). The majority of survivors were suffered from an interaction of the three mentioned complains at the same time.

KEY WORDS Halabja Chemical weapons Health complains

INTRODUCTION

Chemical warfare agents are groups that poisonous chemical compounds can cause a variety of health complains in experimental animals and individuals that were directly exposed to them. They were firstly used by German army on July 1917 during the World War I [1]. Several localities in the Kurdistan Region in Iraq were bombed with chemical weapons in 1980s during Iran-Iraq war especially in 1988 [2, 3, 4]. Halabja City is located in the Iraqi Kurdistan region, 260 Km northeast of Baghdad, 83 Km east of Sulaimani City. Halabja was bombed by Iraqi Army with different chemical weapons in 16.3.1988 that caused more than 5000 martyrs and 10000 injury victims [2, 4, 5, 6, 7]. Several chemical agents were used against innocent inhabitants of Halabja and other Kurdish villages, most of them were unknown. However there are some reports and researches that incriminate the use of certain chemicals such as nerve gases, and sulfur mustard (SM) [4,8]. Survivors in this city are still now suffering from a variety of health complains from mild to severe and fatal one as a result of the long-lasting effects of chemicals used in bombing the city [8, 9, 10]. From the several health complains developed among survivors of Halabja bombardment were cancer, respiratory, ophthalmological, dermatological, reproductive and immunological complains [8, 11].

Researches done on Iranian victims during Iran-Iraq war showed that they were suffered from defects in some hormones, congenital malformations in newborn babies delivered by pregnant women who were the victim of chemical bombardment [12, 13, 14, 15]. Also other researchers concluded that the effects on interface tissues (skin, eye and airway) are related to dose and period of exposure. Ophthalmologic injuries have a shorter latent period than the skin, although eye injuries are usually the most common and

incapacitating injuries after SM exposure [16]. The aim of this study is to determine common health complains among survivors in Halabja city including both sexes and different age groups after more than twenty years of the massacre.

METHODS AND PATIENTS

This study was done on 40 volunteer survivors of the chemical attack of Halabja, city who were survived from the bombardment in 16 March 1988. The study was conducted between March and October 2000. All exposed persons were at Halabja during the attack and they were asked for making different tests and examinations, during the research and were agreed and wrote for us as volunteers. They entered the study after they have been fully examined and investigated by specialist doctors from different branches of medical specialties.

The patients (20) males and (20) females aged between (16) to (69) years, were clinically examined for diseases which can be related to the attack. Diseases were diagnosed clinically and supported when indicated by laboratory and radiological examinations.

RESULTS AND DISCUSSIONS

More than 20 years have passed on the chemical bombardment of Halabja, and the people are still suffering from a variety of health complains.

The main health complain among survivors was respiratory problems followed by ophthalmological and dermatological complains (Fig. 1).

The most common complain was respiratory disease (75%). The majority of them have multiple health complains such as respiratory and ophthalmological complains (33.3%); respiratory and dermatological complains (26.7%); respiratory, ophthalmological and dermatological complains (16.7%), whereas only (23.3%) have respiratory

complains alone (Fig.2). Respiratory complains included shorten breath, caught; expectorals due to chronic bronchitis, fibrotic lung diseases, and asthma. The increased incidence of chronic respiratory tract problems among survivors in Halabja could strongly be related to Sulfur Mustard (SM) attack, which is used against innocent inhabitants of the city [8], The SM is known by its damage effects on the respiratory system as reported by different researchers [10, 17]. Many investigators found the effects of SM on respiratory tract and observed a relationship between lung cancers and SM and some other chemical gases in humans and experimental animals [18, 19, 12, 21]. The results of this study were in agreement with them.

Ophthalmological complains comprised (57.5%) of all survivors who were examined in this study. The majority of them were within ophthalmological and respiratory complains together (43.5%) followed by ophthalmological and dermatological complains

(21.725%), and those with multiple complains or more than two complains at the same time (21.725%), whereas (13.05%) have suffered from dermatologic complains alone(Fig. 3). The most common ophthalmologic complains included dryness of the eye, allergic eye disease and injured visual acuity. It was reported that soon after exposure, SM can cause acute ophthalmological injuries which become severe and lead to conjunctivitis, corneal opacity, and blindness [22, 23]. A number of ophthalmological injuries can result in long lasting or permanent conditions such as keratitis or delayed keratopathy, which is associated with corneal ulceration and gradual erosion of the cornea, sometimes leads to vision impairment. These conditions can have a latency of 8-40 years and have been noted in several cases [23, 24]. All of these are related to complain observed among survivors of Halabja that confirmed in this study (Figures 1, 3).

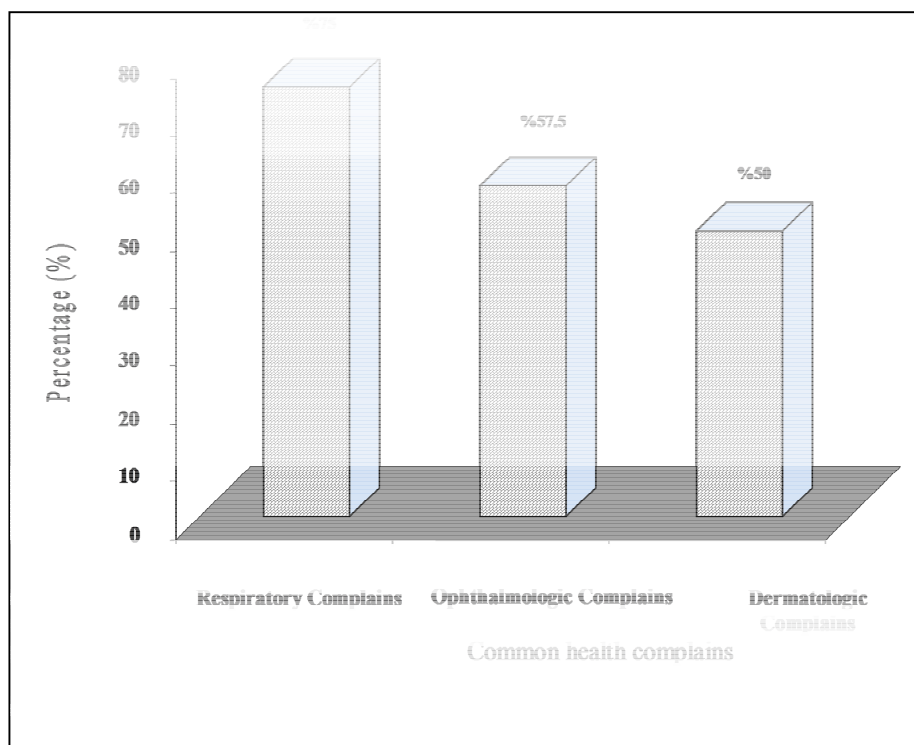


Fig (1):- Common Health Complains among survivors in Halabja.

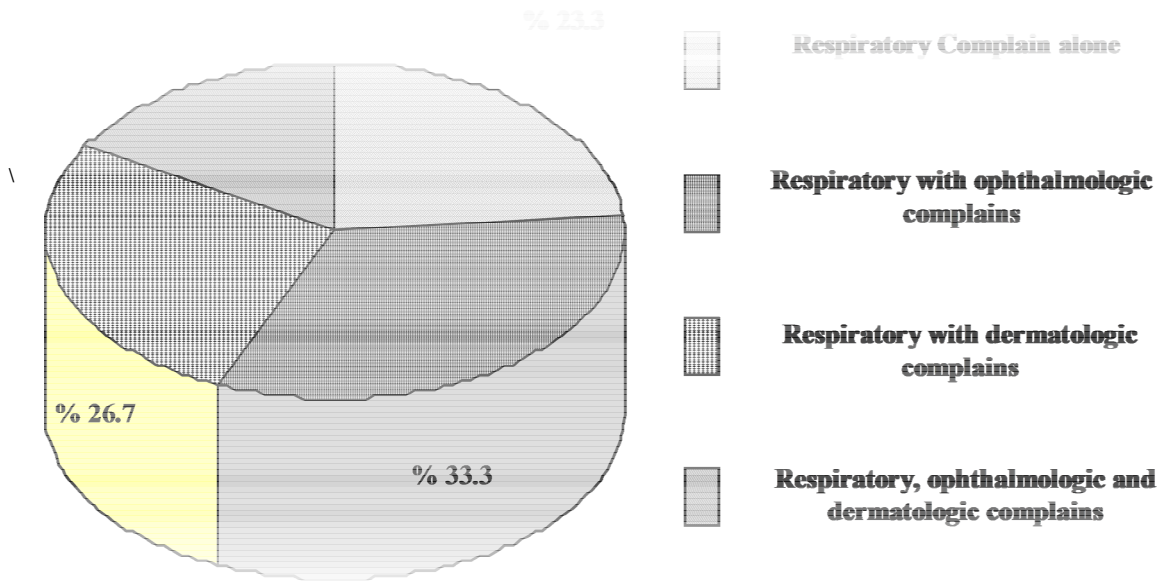


Fig (2):- Respiratory and its association with other health complains among survivors in Halabja

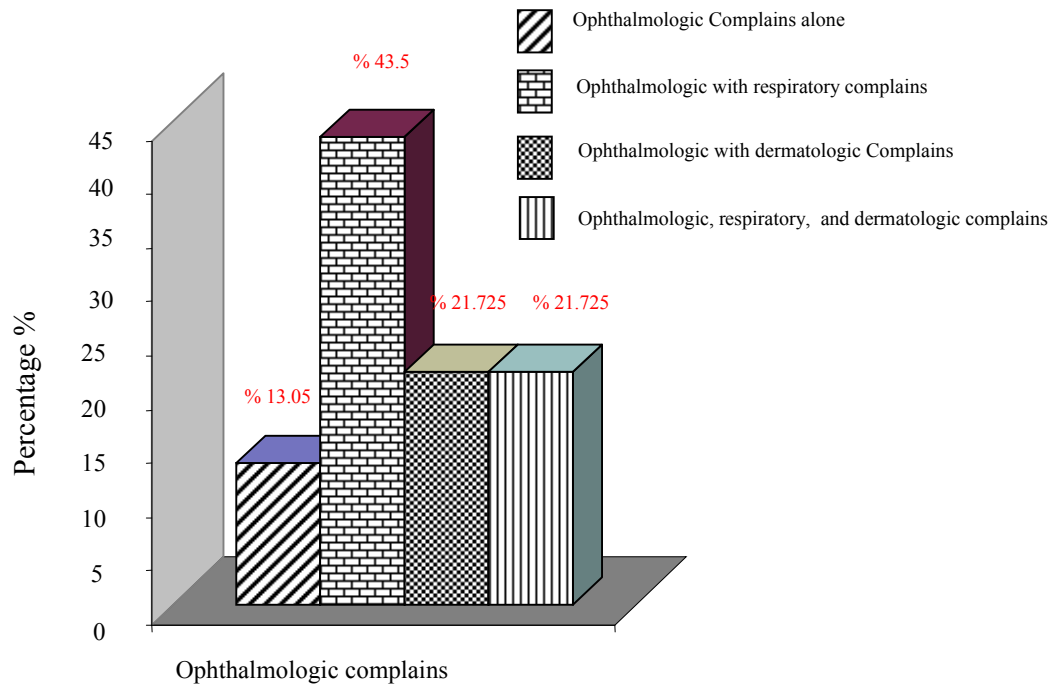


Fig.(3):- Ophthalmologic and its association with other health complains among survivors in Halabja

The third common complain among survivors was dermatological complains (50%), either alone (10%) or with respiratory complains (40%), or with ophthalmologic diseases (25%) and with both respiratory and dermatological complains (25%) (Fig.4).

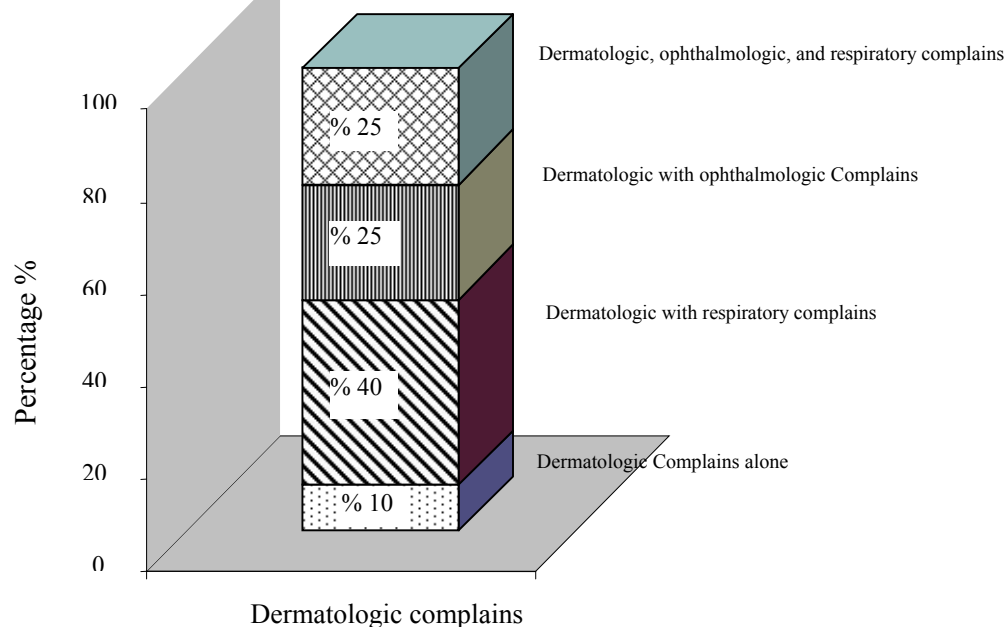


Fig.(4):- Dermatologic and its association with other health complains among survivors in Halabja

The Dermatologic problems included chronic eczema, and other allergic diseases were due to the direct contact of SM and other chemicals with the skin [25]. These complications may be acute and severe, and lead to damage of the skin, burns and blistering. Some of them were permanent, in spite of chronic changes in pigmentation and photosensitivity [10], which was common among survivors with skin, complains. Related observations were obtained by Momini *et al.*, (1992) [16] when studying a group of Iranian chemical victims. Dermatological results obtained in this study were in agreement with all prementioned observations by other researchers.

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المشاكل الصحية الشائعة عند المتعرضين الناجين من القصف الكيماوي لمدينة حلبجة

الخلاصة

لغرض التحقق من المشاكل الصحية الرئيسية عند المتعرضين الناجين من القصف الكيماوي لمدينة حلبجة الواقعة في اقليم كردستان العراق و التي تم قصفها بالاسلحة الكيماوية من قبل الجيش العراقي في ١٦-٣-١٩٨٨, اجريت هذه الدراسة مابين شهر آذار وتشيرين الاول لسنة ٢٠٠٠ على اربعين مواطنا ناجيا من اهالي حلبجة و اللذين تعرضوا للاسلحة الكيماوية عند الفاجعة. اظهرت التحقيقات السريرية و التقارير الطبية بان كل الناجين يعانون من مشاكل صحية متباينة و التي تضمنت مشاكل الجهاز التنفسي (%٧٥) و مشاكل الجهاز البصري جاءت في المرتبة الثانية (%٥٧.٥) في الوقت الذي جاءت المشاكل الجلدية في المرتبة الثالثة (%٥٠). معظم المصابين كانوا يعانون من اكثر من مشكلة صحية في نفس الوقت مما سبق ذكرها.

طرفية تندرستية باوةكان لة نيوان بركةوتوانى رزطاربوو لة كيميابارانى هةللةبجة

ثوخته

بلمةبستى تاوتويكردى طرفية تندرستية سةرعةكيةكانى بركةوتوانى رزطاربوى كيميابارانى هةللةبجة كة شاروؤضكيةكة دةكةوتية هةريمى كوردستانى عىراق و لةلاين سوئاي عىراقوة كيمياباران كرا لة ١٦-٣-١٩٨٨ دار نةم تويذينةوية نةنجام درا لة نيوان نازار و نوكتوبىرى سالى ٢٠٠٠, لةسەر ضل هاوو-لاى هةللةبجى كة بقرضةكى كيمياوى كوتوبون رزطاربون لةكاتى كارةساتةكدا. ليكولينهوة كلينيكيةكان و راؤرتة نزيشكيةكان بةدريانخست كة سةرجهم بركةوتوة رزطاربووكان دةنالين بةدست طرفتى تندرستى جوراوجورةوة نةوانيش بريتى بوون لة طرفتى كونةندامى هةناسةدان (%٧٥), طرفيةكانى كونةندامى بينين بة ثلةى دووهم هاتن بة ريذةى (%٥٧.٥) لةكاتىكدا طرفيةكانى ئيست بة ثلةى سييةم هات (%٥٠). زورينةى رزطاربووكان دةنالين بةدست زياتر لة يةك طرفت لة هةمان كاتدا لةو كيشانةى ئيشتر باسكران.