BURDEN OF CHEMICAL WEAPONS USED AGAINST IRANIANS WITHIN THREE POST-WAR DECADES

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Day1: 29 April. 2019
Time: 10:30-12:00

180,000 people killed, 
500,000 requiring prolonged medical care & 
2,700,000 relatives

At least: Every Iranian killed in war has lost 57.1 years of his/her life due to war.

Iran- Iraq war: 1980-1988

- Despite signing the international treaties, Iraq frequently used chemical weapons both Sulfur mustard (1800 tons) and Nerves agents (Tabun (600 tons) and Sarin (140 tons))
- 1984-1988
- The heaviest attack: City of Sardasht in (1987)

- 100,000 bombs, bullets & short-range missiles
- Two third, during the last 18 Months of the war

1,000,000 exposed
100,000 clinical and subclinical
4% killed
96% survived
long-lasting health effects in those who survive exposure
2% female

CHEMICAL WEAPONS VICTIMS (SM): ACUTE EXPOSURE 3.5% OF PAPERS

Dose, Density, compound, concentration, duration, route of exposure

- Respiratory
- Ocular injuries
- GI
- Skin lesions: 70%

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CHEMICAL WEAPONS VICTIMS (SM)

- 63,417 people exposed to Chemical Weapons (11.4 % of war injured)
  - 98% males
  - 2% female

- 151,770 chemical injuries registered VMAF
  - mild (97.3%),
  - moderate (2.2%) and
  - severe (0.5%)
The more severe the initial exposure and duration of the problems, the higher the likelihood of SM severe conditions

- **Respiratory:** Mustard lung
- **Ocular:** dry eye – progressive and permanent corneal meting - blindness
- **Skin:** Xerosis (42% vs 5%), Eczema (25% vs 6%), Cherry angioma (33% vs 7%)

**Cancer:** Acute exposure

- Lymphatic & hematological, GI

**Prescriptions:** Topical & Systematic

Bronchodilators, Eye drops, Emollients, Corticosteroids, Antihistamines, surgery, stem cell graft

CHEMICAL WEAPONS VICTIMS (SM): HEALTH CARE UTILIZATION

- High rate of physician visits and medications/prescription: 1.8 times higher than other injured ones

- High rate of hospitalization 6 times higher than general population & 2.3 their than counterparts

- High rate of para-clinical: 2 times higher

(Mousavi et al study, J med CBR 2011.) (In press study; 2019)
In screening: 90% survivors suffer from one kind of mental disorders

40-60% of Psychiatric disorders: Depression, Anxiety, PTSD

4 times higher than Iranian community

2 times higher than their counterparts

**CHEMICAL WEAPONS VICTIMS (SM): QUALITY OF LIFE**

- Chemical warfare survivors
- Non-chemical warfare survivors

- **Pattern** of scoring among exposed and unexposed
- In some domains: two or three times lower than their counterparts
- **Very poor conditions ~ 20**: role physical, role emotional, general health, bodily pain and vitality

*(Health and Quality of Life Outcomes. 2009)*
*(Mousavi et al study, J med CBR 2011.)*
Marital Stability & compatibility

Rate of divorce: 1.5% versus 14%

Majority of spouses believe that veterans have sacrificed their life to defend against the invasion and thus now they should care such heroes

**CHEMICAL WEAPONS VICTIMS (SM): “HIDDEN VICTIMS”**

- Pattern of scoring among spouses & NL female
- In some domains: **two times** lower than their NL Population
- Very poor conditions ~ 40

Role physical, role emotional, general health, bodily pain, General health and vitality

(Rehabilitation Nursing: 2014.40: 3)
CONCLUSION: CHEMICAL INJURIES (SM)

The effects present a significant costly challenge to health care professionals.

Future challenges:

- Need to find improved ways of managing victims of the chronic complications as well as their families
- Elderly
- Nerve Agent including (Tabun (600 tons) and Sarin (140 tons))
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