REVIEW ARTICLE

SYRIA CONFLICT AND CHEMICAL WEAPONS: WHAT IS THE REALITY?

Jiri Patocka 1,2

1 Institute of Radiology, Toxicology and Civil Protection, Faculty of Health and Social Studies, University of South Bohemia České Budějovice, České Budějovice, Czech Republic
2 Biomedical Research Centre, University Hospital, Hradec Kralove, Czech Republic

Received 3rd February 2016.
Revised 16th February 2016.
Published 4th March 2016.

Summary

The Syrian civil war is a shameful matter for the contemporary world. It is full of suffering for the civilian population and is one of the causes of the current huge migration of Syrian people in Europe. Suffering of people affected by the war is still escalating due to use of banned chemical weapons. The entire civilized world is appalled by the atrocities of the Syrian civil war.

Key words: Syrian civil war; chemical weapons; victims, sarin; mustard gas; chlorine

INTRODUCTION

Since 2013, when the regime of Bashar al-Assad allegedly used chemical weapons (CW) against the civilian population, the use of chemical weapons in Syria has often been discussed as a very thorny problem [1]. What is the truth? What do we know about this? The situation is very confusing and information is conflicting, depending on which side is served. Let us focus a bit on it. Use of chemical weapons in the Syrian Civil War has been confirmed by the United Nations [2]. The deadliest attacks were the Khan al-Assal attack in the suburbs of Aleppo in March 2013 and the Ghouta attack in the suburbs of Damascus in August 2013. Several other attacks have been alleged, reported and/or investigated [3-5]. Prior to September 2013 the Syrian government had not publicly admitted to possess chemical weapons, although Western intelligence services believed it to hold one of the world's largest stockpiles.

Syria's chemical weapons stocks, and the possibility that President Bashar al-Assad's government might use them, has been one of the factors that has most worried the observers of the conflict. In July 2012, the Syrian government implicitly admitted what had long been suspected by the experts in the field of chemical weapons proliferation - that Syria had stocks of chemical weapons [6]. Damascus said the weapons, stored and secured by the armed forces, would never be used "inside Syria", but would be used against an external attack [7].

A February 2014 a report from the UN Human Rights Council stated that the chemical agents used in the Khan-Al-Assal attack bore the "same unique hallmarks" as those used in the 2013 Ghouta attacks. The UN report also indicated that the perpe-
tors of the Al-Ghouta attack “likely had access to the chemical weapons stockpile of the Syrian military” [8].

CHEMICAL WEAPONS IN SYRIA CONFLICT

The Syrian uprising, which started in 2011, brought great concern among the Chemical Defense Community. Until October 14, 2013, Syria was one of the seven non-State Parties of the Chemical Weapons Convention (CWC). In 1968, Syria acceded to the 1925 Geneva Protocol, which prohibits the use of CW, but not other activities, like production or stockpiling, which are enshrined in CWA. The Syrian government had been ambiguous in its public statements about its chemical capability and even in 2005 it said that the “Syrian Arab Republic does not possess chemical weapons, their means of delivery, or any related materials” [9]. Nevertheless, soon after the Syrian conflict started, both fractions, the Bashar al-Assad regime on one side and the Syrian opposition on the other, were accusing each other of CW use. The Syrian conflict has been and still is of a special concern, not only because the Syrian government has a chemical capability, but also because there are many actors in this conflict which develops into a global conflict [10].

REPORTED CHEMICAL WEAPON ATTACKS IN THE SYRIAN CIVIL WAR

After the first chemical attack in Syria in 2013, other attacks followed. The world has been learning about them primarily from news reports. All reports, however, may not be objective. There were many chemical attacks in Syria and all available information about them is listed in Table I. However, not all the sources from which the table draws are credible. But other sources of information are not available or are very unreliable. Alliance BRICS (Brazil, Russia, India, China, and South Africa) accused President Bashar Assad’s regime of mass atrocity crimes without levying the same accusation against the rebels fighting the regime [12].

Table I. Reported chemical weapons attacks in the Syrian Civil War

<table>
<thead>
<tr>
<th>Date of Attack</th>
<th>Location</th>
<th>Attack Controlled by</th>
<th>Civilian Victims Fatal/Non-fatal</th>
<th>Soldier Victims Fatal/Non-fatal</th>
<th>CW-agent</th>
<th>Information Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 October, 2012</td>
<td>Salgin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[13]</td>
</tr>
<tr>
<td>23 December, 2012</td>
<td>Al-Bayadah</td>
<td>Free Syrian Army</td>
<td>0/5</td>
<td>0/Approx. 100</td>
<td>Agent 15 (?) ***</td>
<td>[14, 15]</td>
</tr>
<tr>
<td>24 March, 2013</td>
<td>Adra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[13]</td>
</tr>
<tr>
<td>11 and 12 April, 2013</td>
<td>Jobar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[13]</td>
</tr>
<tr>
<td>13 April, 2013</td>
<td>Sheikh Maqsood, Jobar</td>
<td></td>
<td>3/&gt; 12</td>
<td></td>
<td></td>
<td>[13]</td>
</tr>
<tr>
<td>14 April, 2013</td>
<td>Jobar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[13]</td>
</tr>
<tr>
<td>29 April, 2013</td>
<td>Saraqib</td>
<td>Free Syrian Army</td>
<td>1/10</td>
<td>0/2</td>
<td>Sarin</td>
<td>[13]</td>
</tr>
<tr>
<td>23 May, 5 August, 2013</td>
<td>Adra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[13, 17]</td>
</tr>
<tr>
<td>21 August, 2013</td>
<td>Ghouta</td>
<td></td>
<td>734/?</td>
<td></td>
<td>Sarin</td>
<td>[17, 18]</td>
</tr>
<tr>
<td>21 August, 2013</td>
<td>Muadamiyat al-Sham</td>
<td></td>
<td>103/?</td>
<td></td>
<td>Sarin</td>
<td>[18, 19]</td>
</tr>
<tr>
<td>22 August, 2013</td>
<td>Jobar</td>
<td>Syrian Army</td>
<td>0/16</td>
<td></td>
<td></td>
<td>[13]</td>
</tr>
<tr>
<td>25 August, 2013</td>
<td>Ashrafiyat</td>
<td>Syrian Army</td>
<td>0/5</td>
<td></td>
<td>Sarin</td>
<td>[13]</td>
</tr>
<tr>
<td>10, 11, and 12 April, 2014</td>
<td>Kafr Zita</td>
<td>Syrian opposition</td>
<td>2/112</td>
<td></td>
<td>Chlorine</td>
<td>[20, 21]</td>
</tr>
<tr>
<td>12 and 13 April, 2014</td>
<td>Al-Tamanah</td>
<td>Syrian opposition</td>
<td>0/137</td>
<td></td>
<td></td>
<td>[21, 22]</td>
</tr>
<tr>
<td>14 April, 2014</td>
<td>Halfaya</td>
<td></td>
<td>0/4</td>
<td></td>
<td>Chlorine</td>
<td>[20]</td>
</tr>
</tbody>
</table>

40
Places in Syria, where the most serious chemical attacks were executed, are marked on the map in Figure 1 below.

THE SYRIAN CRISIS IS ALSO A CRISIS OF SYRIAN HEALTH

It is difficult to assess what loss of life was caused by chemical attacks and how it influenced the overall result of the conflict. But certainly the attacks contribute to the overall devastation and decline of medical care in the country [33]. The Syrian crisis has created an unprecedented strain on health services and systems due to the protracted nature of the warfare, the targeting of medics and health care infrastructure, the exodus of physicians and nurses, the shortage of medical supplies and medications, and the disruption of medical education and training [34]. The Syrian conflict is one of the largest humanitarian crises of the 21st century [35]. Assistance of foreign missions is useful, but it can’t replace failing Syrian Health Service.

CONCLUSIONS

The Syrian conflict is an ongoing internal armed political conflict in Syria. The conflict began on March 15, 2011 by peaceful demonstrations, in the framework of the so called Arab Spring. The conflict developed into a rebellion of a significant portion of the population and in 2012 it escalated into the civil war and a de facto fragmentation of the country into many fractions struggling for a variety of targets within a very confusing conflict.

A part of this conflict is the use of chemical weapons, which is a flagrant violation of the international convention on the prohibition of chemical weapons. It is not entirely clear origin of these banned weapons, nor that drives this prohibition. The situation is very confusing and the parties involved in the conflict are blaming each other. This article attempts to provide a comprehensive picture about individual chemical attacks, a place of conflict, about who led these attacks, which poisonous substances were used and how many victims there were.
The results of our survey show that the CW were used by all parties of the conflict, that the attacks caused by chemical warfare agents were carried out in many places in Syria, and that the mostly used substances were sarin, mustard gas and chlorine. The largest number of fatalities was caused by a neuro-paralytic agent sarin.

ACKNOWLEDGMENTS

This work was supported by the long-term organization development plan (University Hospital, Hradec Kralove, Czech Republic).

REFERENCES

24. Hollande issues warning on chemical strikes, dailystar.com.lb.
26. Meria special report: Did ISIS use chemical weapons against the Kurds in Kobani? The

GLORIA Center of the IDC Herzliya University.
12 October 2014.
27. Field report about the gas attack in Sarmin city & Qmenas village. MESOP. 16 March 2015.