CASE 5. Chemical weapons:

A Sarin gas attack on Khan Sheikhoun (Syria, 2017)

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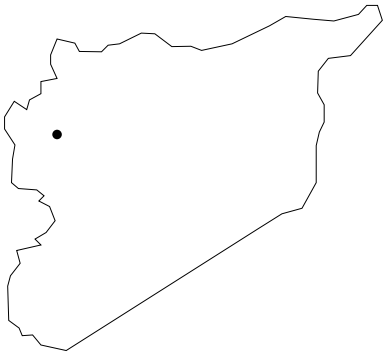
COUNTRY

Syria



PERPETRATOR

The Syrian Armed Forces

ACT

carried out a chemical attack on Khan Sheikhoun

OBJECTIVES*

- to instill fear in civilians prior to a military offensive
- to punish what it considers 'opposition' areas

** As far as we have been able to discern; the list may not be exhaustive in this regard*

CONSEQUENCES

The death of approximately 90 civilians

Hundreds of non-fatal casualties

Psychological trauma for survivors and people who have lost close ones

In 2017, the frontline of the armed conflict in Syria moved rapidly, putting civilians in the crosshairs in multiple locations. The US-led International Coalition against so-called Islamic State of Iraq and Syria (ISIS) was stepping up its targeting of ISIS-held territories, and the Syrian army and pro-Assad militias were fighting to regain the upper hand in battles with opposition forces. In March, much of the Idlib Governorate became a battleground and by early April, the fighting included air strikes on opposition-held areas as government troops moved north from Hama in attempts to retake the Idlib Governorate. The list of alleged and proven events in which Syrian civilians were harmed was growing fast, and the fighting was closing in on the town of Khan Sheikhoun, which before the war was a mostly agricultural community with about 35,000 inhabitants.

5.1 Case: Chemicals are released on Khan Sheikhoun

On Tuesday 4 April 2017 at 6.26 a.m., some residents started to receive alerts via handheld radios that government aircraft had departed al-Sha'yrat airbase in Homs and were heading in the general direction of Khan Sheikhoun. In the next half hour, four bombs hit Khan Sheikhoun. One projectile struck a main road on the edge of the North Harah neighbourhood between a large grain storage and grain processing facility on one side of the road, and residential buildings on the opposite side (Higgins & Yap, 2017).

The bomb exploded with a loud bang. Luckily, the explosion itself was low yield, causing little damage to surrounding buildings and infrastructure, with the notable exception of an impact crater approximately 1.5 metres wide and half a metre deep (Weizman et al., 2019). However, upon detonation the projectile released smoke and gas.

At that early hour, families were mostly still at home, asleep or preparing to go to work or school. Residents who heard the explosion rushed outside to see what happened, and to establish whether they needed to take shelter or flee. Immediately, residents in close proximity to the explosion started having trouble breathing and the terrible truth became apparent: This was a chemical attack and everyone was in acute danger. People rushed back in to find relatives and children, and take them into sheltered rooms or to hospitals. For many, it was already too late. More than 50 people died on location, and hundreds of people were affected by the gas, experiencing symptoms ranging from shortness of breath and anxiety, to pinpoint pupils, convulsions, foaming at the mouth, muscular spasms, and loss of consciousness (Organisation for the Prohibition of Chemical Weapons [OPCW], 2017a). Upon arrival at the site, first responders of the Syria Civil Defence (SCD) found that most victims had no external injuries. Instead, they described the affected as 'people who were walking and then fell down', and as suffering from suffocation and muscle spasms (OPCW, 2017a, p. 20). The first ambulance to arrive took five victims to a nearby hospital. Two hours later, the ambulance was found nearby; the driver had lost consciousness like the others, only to wake up in a hospital later (OPCW, 2017a).

Mazin Yusif, 13, recalls how he had run up to the roof of his house and saw that the strike was in front of his grandfather's house. He hurried towards his house and found his grandfather

slumped over. He ran outside to call for help. 'I got dizzy and then fainted in front of my grandfather's garage. I next found myself here in this hospital, naked in a bed,' he told CNN. The boy's grandmother, Aisha al-Tilawi, 55, said she saw blue and yellow after the plane dropped a chemical-laden bomb. 'We started choking, felt dizzy, then fainted. Mazin was trying to wake up his grandfather. Three of my family died,' she explained, lying in bed with an oxygen mask on her face (Dewan et al., 2017).

About 40 more people died in the hours and days after the attack, bringing the total death toll to between 87 and 92 (Violations Documentation Center [VDC], 2018; Ward et al., 2017). Many first responders and medical personnel in hospitals were contaminated and fell ill as well; several of them required medical treatment.

Forensic studies later confirmed that the symptoms were caused by inhalation of Sarin, an extremely potent nerve agent outlawed by the 1997 Convention on Chemical Weapons, to which Syria acceded in 2013 (OPCW, 2017b).

The Khan Sheikhoun attack is one of the most extensively researched, analysed, and debated instances of civilian harm in the Syrian conflict. It was widely reported at the time by media and led to fierce condemnations and responses (Al Jazeera, 2017; European Council, 2017; Roth et al., 2017): a UN-mandated Organisation for the Prohibition of Chemical Weapons (OPCW) investigation; several heated debates in the UN Security Council (Nichols, 2017); and on 7 April, a retaliatory attack by the United States on al-Sha'yrat Airbase (Gordon et al., 2017). The type of chemical, the prior aerial attacks in the vicinity, and the aircraft used, all point to the Syrian government as the perpetrator. Despite all this, military forces loyal to the Syrian government have continued to use chemical weapons and chemicals as a weapon sporadically since that time (Higgins, 2018; Kimball & Davenport, 2018; US Department of State, 2018).

5.2 Victims: Families torn apart

The Khan Sheikhoun attack caused around 90 fatalities and hundreds of non-fatal casualties. The Violations Documentation Center (VDC) names 87 victims of the attack, among which 34 adult men, 20 adult women and 33 children (VDC, 2018). Upon impact of the projectile, the Sarin gas dispersed in the immediate vicinity from the impact crater and downwind directly over some residential houses in the area.

Some families were hit extraordinarily hard, in particular the Al-Yousef family who lost six children, as well as four female and seven male relatives, according to the VDC list (VDC, 2018). Alaa Al-Yousef, one of the surviving family members, said his family was sleeping and woke up to the sound of the explosion only a few hundred metres away. The first thing they saw was smoke. His father went outside, then rushed back in. He had seen a woman walking near the strike suddenly collapse. The family frantically closed windows and dampened cloths with water and apple cider vinegar to put over their faces. Some of the family were lucky, as the wind went in the other direction. Al-Yousef recalled: 'Many others fled, running from house to house trying to track down relatives. Many of them never made it out' (El Deeb, 2017).

Alaa Al-Yousef's cousin Abdel Hameed, another survivor, recalls he was with his wife and their twins when the rocket hit. He brought them to paramedics and, thinking they would be all right, went looking for the rest of his family. He found the bodies of two of his brothers, two nephews and a niece, as well as neighbours and friends. 'I couldn't save anyone. They're all dead now,' he

said. He was taken to the hospital himself, and it was only later that his relatives could bring themselves to tell him that his children and wife had also died. 'Abdel Hameed is in very bad shape,' said his cousin Alaa. He is being treated for exposure to the toxin, 'but he's especially broken down over his massive loss' (El Deeb, 2017).

First responders arriving at the scene, unprepared for a chemical attack, fell ill too. Hamid Khutainy, at the time a SCD volunteer in Khan Sheikhoun, told The Guardian:

> *It was like Judgment Day. They told us 'HQ, we are losing control'. We had no idea what they were trying to say. Then they said, 'come save us, we can no longer walk'. So, the second and third teams went with just face masks. We could smell it from 500 metres away. (Shaheen, 2017)*

Hundreds of civilians were brought to hospitals in the area. This work was complicated by the targeting of some of these hospitals by the Syrian Arab Army in the days before the airstrike. In addition, ongoing fighting made it difficult to reach some hospitals, especially those across the frontline in Hama. Shortly after, videos were released that showed the targeting by airstrikes of a hospital treating victims of the chemical attack (Jacobo & Masri, 2017), in clear violation of International Humanitarian Law (IHL), and corroborating that the attacks appear to have been coordinated.

Doctors from the hospitals documented symptoms including confusion, muscular weakness, chest tightness, dizziness, headaches, vomiting, shortness of breath, blurred vision, pinpoint pupils, convulsions or muscular spasms, profuse sweating, eye burning, and suffocation. Some casualties reported frequent urination and a state of agitation. Doctors treated patients with atropine and diazepam to counter the effects of inhaled Sarin (OPCW, 2017a). The symptoms presented, their duration, and response to medications are consistent with acetylcholinesterase inhibition. This is corroborated by a laboratory analysis of the blood, urine, and specimens collected from the victims and casualties, which confirmed the presence of Sarin or a Sarin-like substance (OPCW, 2017a).

The potency of the toxin also exposed many of the first responders and medical personnel in hospitals through cross-contamination. Especially affected were the first responders, some of whom ended up requiring medical treatment, such as the above-mentioned ambulance driver who himself fell unconscious after collecting victims at the site of impact (OPCW, 2017a).

Even when the attack would have been carried out with a conventional weapon, there are grave concerns about the application of the principle of distinction between military and civilian targets in this case. There is no indication that any of the victims who were impacted in their residential houses early in the morning were actively involved in any military activity at the time. The industrial sites opposite of the residential neighbourhood were not operational at that hour, and in any case do not seem to have been a legitimate military target by any stretch of the imagination, despite claims otherwise of the Syrian and Russian governments at the time (Triebert, 2017).

5.3 Perpetrators: Evidence points to the Syrian government

Eyewitnesses and information from early responders and journalists largely pointed at the Syrian Arab Army as the perpetrator.

Various witnesses shared video material of aerial attacks. While the aircraft in these are not identified, the army had targeted Khan Sheikhoun and the wider area in the days ahead of the attack (Higgins & Yap, 2017). In addition, the army had been using chemical compounds in attacks on residential areas several times before (Higgins, 2018; Kimball & Davenport, 2018). Syrian Arab Army forces were operating in the area and had already shown to have the means and the intention to target – or at least not spare - civilians supporting the opposition.

The international community condemned the attack and the Syrian government for targeting civilians, but the government launched a campaign of disinformation to deny its involvement. It was backed by the Russian government official Konashenkov who posed an alternative theory altogether: 'From 11.30 to 12.30 local time, [8.30 to 9.30 GMT] Syrian aircraft conducted an airstrike in the eastern outskirts of Khan Sheikhoun on a large warehouse of ammunition of terrorists and a mass of military equipment' (Sputnik News, 2017). Konashenkov said that from this warehouse chemical weapons' ammunition was delivered to Iraq by militants. He added that there were workshops for manufacturing bombs, stuffed with poisonous substances, on the territory of this warehouse (Sputnik News, 2017). Several analysts proposed supporting explanatory scenarios, notably Massachusetts Institute of Technology Professor Theodore Postol who argued on the basis of flawed information that the wind direction at the time does not fit the explanation that Sarin was used, and journalist Seymour Hersh who mislocated the event altogether, and on that basis dismissed the eyewitness accounts as non-credible (Postol, 2017; Hersh, 2017).

These are isolated and oft-refuted explanations that – at least in the case of Sputnik – seem designed to delay fact finding and with that to actively undermine efforts of victims to seek assistance, and ultimately justice. Among others, Bellingcat conducted careful analysis of both Postol's and Hersh's claims, proving that these were based on untruths (Higgins, 2017a). The OPCW reported in July 2017 to be 'confident that the Syrian Arab Republic is responsible for the release of Sarin at Khan Sheikhoun on 4 April 2017' (OPCW Joint Investigative Mechanism [JIM], 2017, p. 10). The OPCW's UN-mandated Joint Investigative Mechanism (JIM) conducted forensic research on site, obtained video and photo materials and spoke to eyewitnesses and found no evidence to support the Syrian and Russian claim of events. Instead, it concludes that: Aircraft dropped munitions over Khan Sheikhoun between 6.30 a.m. and 7.00 a.m. on 4 April 2017; the crater from which the Sarin emanated was created on the morning of 4 April 2017; the crater was caused by the impact of an aerial bomb travelling at high velocity; the symptoms of victims and their medical treatment, as well as the scale of the incident, are consistent with large-scale intoxication of Sarin; and the Sarin identified in the samples taken from Khan Sheikhoun was found to have most likely been made with a precursor from the original stockpile of the Syrian government (OPCW JIM, 2017). Laboratories compared samples taken from the Khan Sheikhoun attack with samples previously collected in chemical attacks and with samples handed over to the UN by the government for destruction in 2014. They found matching signatures in all these samples (Deutsch, 2018).

Several sources identified the aircraft involved in the attack as a Sukhoi 22 (Su-22) attack jet called Quds-1 – the commander of the Su-22 fleet. In 2017, local spotter organisation Syria Sentry deployed a network of spotters alerting others in the region of Su-22 take offs and their apparent flight direction. The organisation alerted on April 4 at 6.26 a.m. that the Su-22 had taken off from al-Sha'yrat airbase in Homs

and not much later, they reported that another aircraft, Quds 6, had also taken off from the base. According to the spotters, it is significant that the commander himself conducted the sortie, as the pilot and his aircraft are associated with other alleged chemical attacks in Syria. The organisation furthermore says they have strong evidence that Russian-operated fixed-wing aircraft conducted follow-up attacks in the same area around seven hours later (Triebert, 2017).

The international research collective Bellingcat managed to piece together evidence of the type of bomb used in the attack, identifying bomb remnants on OPCW photos and publicly available footage as fitting the design of an M4000 Russian-made bomb, a type implicated in previous chemical attacks by the Syrian government (Bellingcat Investigation Team, 2017).

Not often can the perpetrator be identified with such a high degree of confidence.

5.4 Significance: An unpunished violation of international regulations

The Khan Sheikhoun attack is one of several chemical cases for which it is established beyond reasonable doubt that the Syrian Arab Army is the perpetrator. The repeated use of chemical weapons, even after Syria joined the Chemical Weapons Convention (CWC), says something about the disregard of the Syrian government for IHL and for the lives of its own population. The pattern of use of chemical weapons exposes something about their intentions as well. The repeated use of chemical weapons and chemicals as weapon is sporadic but calculated. The attacks with Sarin especially seem designed to instil fear in civilians prior to a military offensive, as well as to show resolve: The determination of the Syrian government to cross all military, legal and ethical boundaries if deemed necessary.

The earlier use of Sarin in 2013 led to enough pressure on the Syrian government to allow an OPCW mission to remove all declared stockpiles of chemical weapons and precursor chemicals (Deutsch, 2014; UN Security Council, 2013), and Syria acceded to the 1997 CWC (OPCW, 2013). It was a remarkable mission, done in a country actively fighting an armed conflict. The mission completed its work in June 2014, concluding that all declared chemical weapons and precursors had been removed but that it was impossible to tell if Syria was free of chemical weapons.

Clearly, the government withheld stockpiles of Sarin. Chlorine, more commonly used by the Syrian Arab Army is relatively easy to make and has likely been produced after Syria became part to the CWC; the precursors used for the Sarin attack in Khan Sheikhoun appear to be from the same batch as the substance declared and removed in 2013 (Deutsch, 2018).

It has proven difficult for the international community to find the right response to this form of tactical use of chemical weapons. While clearly violating international treaties, the use of chemical weapons by the Syrian government regime evidently has been too sporadic to fuel unified international action. In addition, the war in Syria has over time transformed from an internal uprising against an authoritarian regime into a proxy war involving UN Security Council permanent members on opposing sides when it comes to backing or condemning the Syrian government. As a consequence, several UN resolutions designed to put pressure on the Syrian government to refrain from further use of chemical weapons and other internationally forbidden means and methods of warfare have routinely been blocked by UN Security Council

member Russia, at the time actively involved in military offensives in support of the Syrian government. As a result, troops loyal to Assad have used a wide variety of internationally banned or restricted means and methods of warfare, including chemical weapons, starvation of civilians, indiscriminate and disproportionate attacks on civilian neighbourhoods, targeting of civilian infrastructure including hospitals, forced displacement, torture, and detention without due trial.

The retaliatory attack by the US on 7 April 2017 damaged the al-Sha'yrat airbase in Homs but seems to have had very little effect beyond the temporary disruption of operations staged from that base (Gordon et al., 2017). It did not force Syria into reconfirming its compliance with the CWC and the repeated use of chemical warfare by the Syrian Arab Army shows that the government apparently considers the sporadic use of chemical weapons as something you can get away with.

The government's behaviour jeopardises the very object and purpose of the CWC, whose adoption was hard-fought by the international community. The fact that Syria used chemical weapons while being party to the CWC, and seems to be able to do so without meaningful repercussions, exposes the international norm against chemical weapons to erosion. This sets a dangerous precedent.

For the victims dealing with the horrifying events of April 2017, life was further complicated by the fact that the frontline of the fighting between the Syrian Arab Army and the opposition forces moved back and forth until 2019. Then, the army finally definitively solidified their hold on the town. Beside the 2017 chemical incident described in this chapter, there were periods when residents in the town endured almost daily shelling and bombardment by the army and pro-Assad militias. Meanwhile, the Syrian government continues to deny what is proven: It used chemical weapons despite its accession to the CWC, and moreover, it did so on people who were not actively taking part in hostilities.

Images

Casualties from the 4 April 2017 chemical attack on Khan Sheikhoun.

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