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REPORT OF THE MISSION DISPATCHED BY THE SECRETARY-GENERAL TO
INVESTIGATE ALLEGATIONS OF THE USE OF CHEMICAL WEAPONS IN THE
CONFLICT BETWEEN THE ISLAMIC REPUBLIC OF IRAN AND IRAQ

Note by the Secretary-General

1. It is with a sense of dismay and deep regret that the Secretary-General informs the Security Council that, despite many international appeals and world-wide condemnations, chemical weapons continue to be used in the conflict between the Islamic Republic of Iran and Iraq in violation of the Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare of 1925 1/ and that, indeed, the use of such weapons may have intensified. This, regrettably, is the conclusion of the mission of the medical specialist which the Secretary-General dispatched recently to the Islamic Republic of Iran and Iraq to investigate the allegations lodged by both Governments of the use of chemical weapons.
2. It will be recalled that the Secretary-General first dispatched a mission of specialists to investigate the allegations of the use of chemical weapons in the conflict between the Islamic Republic of Iran and Iraq in March 1984. Further investigations were conducted in April 1985, February/March 1986 and April/May 1987.
3. In the report on their investigations in 1987, 2/ the four specialists said that "... technically there is little more that we can do that is likely to assist the United Nations in its efforts to prevent the use of chemical weapons in the present conflict ...". They went on to express the view that only concerted efforts at the political level could be effective in preventing the irreparable weakening of the Geneva Protocol. In his note submitting the report to the Security Council, the Secretary-General said that he shared that view.
4. In a number of letters dated between 17 and 19 March 1988, 3/ the Government of the Islamic Republic of Iran alleged that chemical weapons had been used on a large scale by Iraq in the "Val Fajr 10 operational theatre" and "against Iraqi Kurdish areas", including Halabja, resulting in a large number of casualties. In further letters dated between 18 and 24 March 1988, 4/ the Government of the Islamic Republic of Iran stated that attacks using chemical weapons had also occurred in a number of localities in the vicinity of Marivan, the Islamic Republic

of Iran, and requested 5/ the Secretary-General to dispatch a mission to investigate them. The request was reiterated by the Acting Permanent Representative of the Islamic Republic of Iran in his meeting with the Secretary-General on a number of occasions after 21 March 1988.

5. In the circumstances, the Secretary-General, on 25 March 1988, decided to dispatch a medical specialist to the Islamic Republic of Iran to investigate the allegations lodged by it.

6. The medical specialist to whom the Secretary-General entrusted the assignment is Dr. Manuel Dominquez, who holds the rank of colonel in the Spanish Army Medical Corps and is a specialist in atomic, biological and chemical weapons injuries and Professor of Preventive Medicine at the Universidad Complutense in Madrid. Dr. Dominquez had participated in all the previous missions dispatched by the Secretary-General to the Islamic Republic of Iran and to Iraq in regard to this matter.

7. On 5 April, Iraq alleged in a letter 6/ that chemical weapons had been used by the Islamic Republic of Iran against its troops in the Halabja sector and requested the Secretary-General to send a mission to Baghdad "in order to examine the wounded and obtain detailed information about the attack".

8. The Secretary-General, on 5 April, requested the medical specialist, Dr. Dominquez, who was in Geneva in the process of preparing the report on his investigations in the Islamic Republic of Iran, to travel to Iraq to investigate the allegations made by that Government. Mr. James Holger, a senior official of the United Nations Secretariat, accompanied the medical specialist in his mission to both the Islamic Republic of Iran and Iraq to co-ordinate the work of the mission and to ensure appropriate liaison with the relevant authorities in the Governments of the Islamic Republic of Iran and Iraq.

9. On 14 April 1988, the medical specialist submitted a report to the Secretary-General on the investigations he had conducted in both the Islamic Republic of Iran and Iraq.

10. The Secretary-General wishes to place on record his deepest appreciation to Dr. Dominquez for acceding once again to his request to undertake these investigations and for the exemplary dedication, professionalism and efficiency with which he completed his assigned responsibilities, notwithstanding the constraints of time and conditions under which those investigations were conducted. The Secretary-General also wishes to express his appreciation to the Government of Spain for once again making the services of the medical specialist available to the United Nations.

* * *

11. In transmitting to the Security Council the report of the medical specialist, which is annexed to the present note, the Secretary-General must express his deep sense of dismay and foreboding at the mission's conclusions that chemical weapons continue to be used in the conflict between the Islamic Republic of Iran and Iraq and that their use in recent days has evidently been on an even more intensive scale than before. The specialist's findings that chemical weapons have again been used in both the Islamic Republic of Iran and in Iraq and that there has been an apparent increase in the number of civilian casualties confirm and add further urgency to the grave concern, to which I referred in my note 7/ submitting the specialists' report of last year, that such use could further escalate and seriously undermine the Geneva Protocol of 1925 - a document which for 60 years has been a hopeful symbol of mankind's desire and its ability to mitigate the effects of war through universal adherence to humanitarian concerns. This is indeed an awesome prospect, which the international community must resolve through concrete steps and, above all, a concerted exercise of determined political will to prevent it from becoming a reality. The Secretary-General strongly urges the parties concerned and all Governments seriously to weigh the full implications of the present report for our common future.

* * *

12. The Secretary-General has always affirmed, and does so once again, that, in all his efforts relating to the conflict between the Islamic Republic of Iran and Iraq, his paramount objective is to bring this long and tragic conflict to the earliest possible end. Since the unanimous adoption by the Security Council on 20 July 1987 of resolution 598 (1987), aimed at the achievement of a comprehensive, just, honourable and durable settlement of this conflict, the Secretary-General has, in accordance with the mandate given to him under that resolution, pursued his efforts to achieve its full and rapid implementation. In this connection, the Secretary-General recalls that by its resolution 598 (1987) the Security Council, inter alia, deplored the violation of international humanitarian law and other laws of conflict, and, in particular, the use of chemical weapons in contravention of the obligations under the 1925 Geneva Protocol. The Secretary-General appeals to the Governments of the Islamic Republic of Iran and of Iraq urgently to respond to the efforts of the United Nations to achieve a comprehensive and just settlement through the full implementation of resolution 598 (1987), which is ultimately the only way to end the appalling loss of life and human suffering, including those caused by the continued use of chemical weapons, and to restore peace and stability to the peoples of the two countries and of the region as a whole.

Notes

- 1/ League of Nations, Treaty Series, vol. XCIV (1929), No. 2138, p. 65.
- 2/ S/18852, p. 6.
- 3/ S/19637, S/19639, S/19647 and S/19664.
- 4/ S/19650, S/19651, S/19665 and S/19682.

Notes (continued)

5/ S/19650 and S/19665.

6/ S/19730.

7/ S/18852, para. 5.

Annex

Report of the mission dispatched by the Secretary-General to
investigate allegations of the use of chemical weapons in the
conflict between the Islamic Republic of Iran and Iraq

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LETTER OF TRANSMITTAL

Geneva, 14 April 1988

Sir,

I have the honour to submit herewith my report on the investigation you requested me to undertake concerning continued allegations of the use of chemical weapons in the Iran-Iraq conflict.

In order to carry out the investigation, I visited the Islamic Republic of Iran between 28 and 31 March 1988 and, in accordance with your further request, Iraq between 8 and 11 April 1988, for the purpose of determining, to the extent possible, whether chemical weapons had been used and, if so, the type, extent and circumstances of their use. The report was prepared during the two periods of my stay at Geneva following my return from each country I visited.

In preparing my report, I have taken into account the reports of investigations undertaken in 1984, 1985, 1986 and 1987 at your request and in which I had participated. These reports have served as valuable background information and provided the relevant context within which the present investigation was conducted.

I regret to say that, on the basis of evidence gathered during the present mission, and in spite of repeated appeals by the United Nations, chemical weapons continue to be used in the area and, it would seem, on an even more intensive scale than before. As highlighted in the report submitted by the mission that went to the Islamic Republic of Iran and Iraq last year, the continued use of such weapons in the present conflict increases the risk of their use in future conflicts. This awesome prospect may become reality unless concrete steps are taken to redress the current trends, which appear all the more disturbing if we consider that there has been an apparent increase in the number of civilian casualties as a result of attacks, primarily with yperite (mustard gas). In this connection, the attached report speaks for itself.

Although the use of yperite (mustard gas) was unmistakably confirmed, it was not possible, in the absence of an expert on chemical weapons, to determine the secondary components, additives and impurities which that agent, as well as the acetylcholine esterase-inhibiting substance, may contain.

In undertaking this mission I received support from many institutions and individuals. In particular, I would like to express my appreciation to the Government of the Islamic Republic of Iran and to the Government of Iraq for the co-operation and assistance accorded to me in the fulfilment of my task.

I wish to thank Mr. James Holger, Director, United Nations Secretariat, who accompanied me to the Islamic Republic of Iran and to Iraq and assisted me in the preparation of the report, for his co-operation and advice.

/...

I wish, Mr. Secretary-General, to express my gratitude to you for the confidence you have again reposed in me.

Yours sincerely,

(Signed) Dr. Manuel DOMINGUEZ

I. TERMS OF REFERENCE

1. The Secretary-General decided, in continuation of the investigations undertaken in 1984, 1985, 1986 and 1987, to dispatch a medical specialist to the Islamic Republic of Iran and subsequently to the Republic of Iraq to investigate allegations by each Government of the use by the other of chemical weapons in the conflict between the two countries. He requested the specialist to determine, to the extent possible, whether such weapons had been used and, if so, the type, extent and circumstances of their use. A senior United Nations official accompanied the specialist to co-ordinate the work of the mission and ensure appropriate liaison with the Governments of the Islamic Republic of Iran and Iraq.

II. REVIEW OF DOCUMENTATION

2. In preparation for the drafting of the present report, I reviewed the following United Nations documents:

(a) Report dated 26 March 1984 of the specialists appointed by the Secretary-General to investigate allegations by the Islamic Republic of Iran concerning the use of chemical weapons; a/

(b) Letter dated 17 April 1985 from the Secretary-General addressed to the President of the Security Council (concerning the medical examinations conducted in April 1985); b/

(c) Report dated 12 March 1986 of the mission dispatched by the Secretary-General to investigate allegations of the use of chemical weapons in the conflict between the Islamic Republic of Iran and Iraq; c/

(d) Report dated 8 May 1987 of the mission dispatched by the Secretary-General to investigate allegations of the use of chemical weapons in the conflict between the Islamic Republic of Iran and Iraq; d/

(e) Letters concerning chemical weapons from the Government of the Islamic Republic of Iran to the Secretary-General since the issuance of the report dated 8 May 1987; e/

(f) Letters concerning chemical weapons from the Government of Iraq to the Secretary-General since the issuance of the report dated 8 May 1987; f/

(g) Statements by the President of the Security Council and by the Secretary-General relating to the use of chemical weapons since the issuance of the report dated 8 May 1987; g/

3. We also referred, during the drafting of the report, to the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925. h/

III. METHODOLOGY

4. In order to carry out my task, I adopted, as required, the following approaches:

(a) Interviews with government officials at Tehran and Baghdad in order to obtain information regarding the alleged use of chemical weapons;

(b) Clinical examinations or medical observation of, and interviews with, a number of patients who were allegedly exposed to an attack with chemical warfare agents, supplemented by briefings by the medical staff of the hospitals and centres visited. The clinical examinations were conducted, in the Islamic Republic of Iran, in three hospitals at Tehran, in a convalescence centre on the outskirts of the capital and, finally, in a reception and monitoring centre for the classification of the wounded at Bakhtaran; and in Iraq, in the Al Rasheed Military Hospital at Baghdad;

(c) In the Islamic Republic of Iran, visits to the villages of Nowdoshe and Nejmāl, where the medical specialist conducted medical observation of, and interviews with, villagers reportedly present at the time of the alleged attacks;

(d) In Iraq, a visit to the city of As Sulaymaniyah for briefing on the details of alleged chemical weapons attacks in the Halabja area which reportedly resulted in the wounding of the Iraqi military personnel who were examined by the mission's medical specialist.

5. The mission spent three days in the Islamic Republic of Iran and three days in Iraq. (For the chronology of activities, see appendix I.) In Tehran, the mission met senior officials at the Ministry of Foreign Affairs and visited several medical institutions. A visit was made to the city of Bakhtaran, approximately 600 km south-west of Tehran, and to the villages of Nowdoshe and Nejmāl, north of Bakhtaran, allegedly attacked with chemical weapons. From Tehran the mission flew to Bakhtaran and then travelled by helicopter to Nowdoshe and Nejmāl, with a brief stopover in the provincial capital of Sanandaj. For the return journey the same means of conveyance was used, the whole tour taking approximately 12 hours.

6. In Baghdad we met with senior officials of the Ministry of Foreign Affairs and visited the Al Rasheed Military Hospital. A visit was made to the city of As Sulaymaniyah, some 350 km north-east of Baghdad for an operational briefing with the military authorities of Iraq. We travelled by helicopter. The return journey to Baghdad used the same means of conveyance, the whole visit having taken approximately six hours.

IV. INVESTIGATIONS IN THE ISLAMIC REPUBLIC OF IRAN

A. Medical aspects

7. The medical investigations conducted by the medical specialist were based on the clinical examination or observation of a total of 66 patients who had

reportedly been affected by aggressive chemicals. Of this total, clinical examination was conducted on 60 patients as follows: 11 patients admitted to the Labbafi-Nejad Hospital, 9 patients admitted to the Baghiat Ullah Hospital, 26 patients admitted to the Loghman-al-Doleh Hospital, all three hospitals being in Tehran, and 14 cases in the Mofatteh Convalescence Centre near Tehran. In addition, observation was made of 6 persons: 3 persons admitted to the Bakhtaran reception and monitoring centre and 3 persons affected in the village of Nowdoshe. Furthermore, one cadaver was examined at the Labbafi-Nejad Hospital.

8. At the village of Nejmal, the medical specialist interviewed three persons suffering from the effects of chemical weapons. Owing to time limitations no clinical examination or medical observation was made of them.

9. The patients examined were selected at random from among the total number of patients admitted to each of the hospitals/centres mentioned above who were reported to have been exposed to chemical agents. According to information provided by the medical staff of three of the hospitals/centres visited - Labbafi-Nejad Hospital, Loghman-al-Doleh Hospital and Mofatteh Convalescence Centre - where a total of 51 persons were examined or observed by the medical specialist, a total of some 600 persons who had been affected by chemical weapons had been hospitalized either prior to or at the time of the specialist's visit. In the other hospitals/centres visited, no comparable information was provided.

10. Fifty-six other patients were seen but no medical history was taken or examination conducted.

11. From the cursory examination by the medical specialist, it was also possible to determine that many patients other than the 66 mentioned above (listed in appendix II) had been affected by a vesicant agent, since this kind of agent produces lesions which are easily visible without the need for a detailed examination.

12. The patients' medical examination described in this report was conducted personally by the medical specialist on the mission. The patients' medical history, their names and ages, as well as the date and place of the alleged attack and the first symptoms that had led them to believe that they had been exposed to chemical agents, were obtained by questioning the patients through an interpreter. There may be slight spelling errors or inconsistencies in the spelling of names and geographic locations, which varies frequently according to the maps used. There may also be slight errors in the dates on which the alleged attacks took place, since the patients, because of their mental condition, the time elapsed since the attack and the need to convert dates from the Islamic to the Gregorian calendar, sometimes were uncertain about the information supplied.

13. Of the 66 patients and cases examined by the medical specialist, 62, who make up the main group, showed clear signs of having been exposed to yperite (mustard gas).

14. The aspect of the lesions differed according to the time elapsed between the attack and the examination. Most patients were examined some time after the attack

had taken place. (Fifty-nine of them were examined more than six days after the attack.)

15. On the basis of the examinations conducted by him, the medical specialist concluded that, in general, the chronological development of symptoms had been the following: after a period that varied according to the intensity of the lesion, the patient felt a burning sensation, vomited, showed conjunctival irritation accompanied by lachrymation and marked photophobia, which prevented him from keeping his eyes open and, consequently, from seeing. Then intense erythema developed on the affected surface, on which vesicles appeared. Most of these vesicles were enormous, had a large dome and were filled with an amber liquid. After a few days, the dome of the blister had broken, exposing a lesion resembling the ones that result from second-degree burns. The rest of the skin affected by erythema had an even darker pigmentation at the level of the armpits, groin, scrotum and the skin of the penis. In general, genital effects on women were less severe than on men. The palms of the hands and soles of the feet as well as the scalp remained unaffected. In cases where a gas mask had been used, it had protected the face and respiratory tract, but had not prevented conjunctivitis, which possibly resulted from volatilization of the yperite with which clothing had been saturated. Patients who had not used gas masks showed respiratory insufficiency in different degrees, from laryngitis accompanied by aphonia to tracheobronchitis and, in some cases, respiratory distress that required respiratory assistance. There was no correlation between the skin lesions and the frequency and seriousness of the respiratory lesions.

16. Some patients developed acute leukopenia of up to 1,200 leukocytes per cu mm, and lymphopenia; in a few cases, the marrow was globally affected.

17. The second group of patients is composed of four persons: two were affected at Halabja on 16 March (cases No. A-33 and No. A-34) and the other two at Marivan on 18 March (cases No. A-54 and No. A-55). These patients showed increased nasal, salivary and lachrymal secretions and suffered from diarrhoea, urinal incontinence, miosis, respiratory difficulty and rapid loss of consciousness. After treatment with atropine these patients had recovered, but cases No. A-54 and No. A-55 still showed signs of extreme muscular weakness at the time of the examination. In case No. 60 the patient had been affected by yperite and also exhibited symptoms similar to those described above.

18. The medical specialist was informed by the medical staff of hospitals that there had been many other cases clinically similar to the above.

19. From the characteristics described above, it can be inferred that these persons had been affected by a neurotoxic acetylcholine esterase-inhibiting agent. The concentration of this enzyme was not established, as several days had elapsed since the patients had been exposed to the aggressive agent. It was not possible to determine the chemical composition of the agent, although quite possibly an organo-phosphorous compound had been used. It may be noted that Tabun, as well as other organo-phosphorous compounds, produces symptoms very similar to those described above and that such agents had been used before in the Iran-Iraq war, as determined by United Nations missions, in particular, the ones conducted in 1984 and 1986.

20. At the morgue of the Labbafi-Nejad Hospital it was possible to examine the cadaver of a young woman (case B) who had been affected by mustard gas.

21. The medical examination conducted by the specialist was supplemented by additional information received from doctors at the hospitals and from experts on chemical warfare, which the medical specialist found credible and useful. In particular, mention should be made of the information supplied by Dr. Foroutan, Medical Director of the Medical Association for Victims of Chemical Warfare, who had noticed in some patients from Halabja symptoms of tachypnea, subcoma with respiratory distress and reddening of skin. These had led him to think of poisoning with hydrocyanic gas. Treatment with oxygen, sodium nitrite and thiosulfate had rapidly improved those patients' condition.

22. On our visit to Nejmal, the person who was introduced to us as the responsible authority of the town told me that he had reported that the town had been attacked with hydrocyanic gas. When questioned why he thought that that had been the aggressive chemical used, he was unable to substantiate his statement. From my investigation, I have been unable to obtain any definitive information about the use of hydrocyanic gas as an aggressive chemical.

23. It is possible to conclude categorically that the patients examined clinically by the medical specialist have suffered the effects of two kinds of aggressive chemicals: yperite, also known as mustard gas, and a neurotoxic acetylcholine esterase-inhibiting agent.

B. General information

24. The patients whom I examined testified that they had been injured as a result of attacks with chemical agents in Halabja between 16 and 18 March or in different localities in the Marivan-Nowdoshe-Sanandaj area between 17 and 27 March.

25. According to the same testimony, the number of dead and injured as a result of the use of chemical agents had been high, especially among the civilian population, including women and children.

26. Local villagers - both among the patients examined and those interviewed in affected areas - stated that the chemicals had been released from bombs which had been delivered by aircraft in different localities mentioned in table 3 below. According to some of those villagers, the aircraft had been Mirages painted white.

27. At the villages of Nowdoshe and Nejmal it was necessary for the members of the mission to use protective masks most of the time.

28. In Nowdoshe we were taken to sites where four fragmentation bombs had fallen on 29 March, causing only material damage to houses but no injuries. Shrapnel from one of these bombs was shown to us and was observed to bear markings in Cyrillic.

29. During our brief stay in the Islamic Republic of Iran we became aware of widespread concern among Iranians, officials as well as the average citizen, over

the possible use of chemical weapons against their cities. Indicative of such concern were the instructions imparted by the authorities to the population at large and published in the local press on how best to protect themselves in the event of such attacks.

30. Throughout its stay in the country, the mission received full co-operation and all necessary assistance from the Iranian authorities, including timely and adequate protection for the mission.

C. Summary of findings

31. At the specific request of the Secretary-General I visited the Islamic Republic of Iran between 28 and 31 March in order to conduct an investigation into the alleged use of chemical weapons in the Iran-Iraq conflict. The investigation was conducted principally at medical institutions in the Tehran area as well as at Bakhtaran. I did not visit the area where the majority of the patients said they had been exposed to chemical agents.

32. My summary comments in relation to the present investigation are as follows:

(a) Of the 66 cases included in the present report, 62 patients suffered from conjunctivitis in different degrees, skin lesions that went from erythema similar to the kind found in second-degree burns, blackening of the skin, extensive vesicular lesions and ulcerations resembling second-degree burns. In some cases patients also exhibited respiratory insufficiency and leukopenia. From all these symptoms, it is possible to affirm that these patients have been exposed to yperite, a substance also known as mustard gas;

(b) Four of the patients (as well as one who was exposed to the effects of both aggressive chemicals) had been affected by a neurotoxic agent that inhibits acetylcholine esterase;

(c) From the number of patients seen in different hospitals and from the information received from their medical staff, it can be inferred that, compared with previous years, there has been an increase in the intensity of the attacks with chemical agents, in terms of both the number of victims and of the severity of injuries sustained. Furthermore, there appeared to be a higher proportion of civilians among those affected than in previous investigations.

V. INVESTIGATIONS IN IRAQ

A. Medical aspects

33. The medical investigations conducted by the medical specialist were based on the clinical examinations of a total of 39 patients - 27 soldiers and 12 officers - who had been admitted to the Al Rasheed Military Hospital at Baghdad after reportedly being affected by aggressive chemicals; of this total of 39 patients, 33 were in serious condition.

34. A cursory medical observation was also made of the injuries suffered by 72 additional soldiers who had been admitted to the said Hospital; of these, 7 patients were to be discharged shortly after the time of the visit by the mission's medical specialist.
35. All patients examined or observed were male soldiers. Those examined by the specialist were between 19 and 49 years of age (average age: 28 years old).
36. The 111 patients examined or observed were among a total of 114 who were reported to have been exposed to the effects of chemical weapons on 30 and 31 March. Of this total, one officer and two soldiers had been discharged prior to the arrival of the mission. Up to 9 and 10 April, when the examinations were conducted, there had been no deaths among the 114 patients.
37. The patients' medical examination described in this report was personally conducted by the medical specialist on the mission. The patients' medical history, their names and ages, as well as the date and place of the alleged attack and the first symptoms that had led them to believe that they had been exposed to chemical agents, were obtained by questioning the patients through an interpreter.
38. From the medical history and the examinations undertaken, there emerged a characteristic profile of the affected.
39. A clinical examination by the medical specialist showed that nearly all patients suffered from conjunctivitis in different degrees, accompanied by photophobia and lachrymation. In the most severe cases blepharospasm was also noted.
40. The entire body, and in particular the face, armpits and both sides of the groin exhibited pigmentation ranging from dark to black. In the most serious cases, lesions resembled second-degree burns, under many of which there was granulation tissue that was not infected. A few patients exhibited vesicles left intact after detachment of the dome of much larger vesicles.
41. Some patients had tracheobronchitis; others, laryngitis. A few patients had leukopenia and several had lymphopenia. Infections, mainly respiratory, accounted for leukocytosis; however, lymphopenia was also present.
42. In six cases, an analysis was made by the medical specialist to establish the plasmatic choline esterase level. In three cases - patients Nos. C-6, C-15 and C-21 - that level was determined to be low. In two cases, an analysis was also made to determine the presence of cyanic acid. In both cases the results were negative.
43. The patients' general condition ranged from virtually normal to very bad with reserved prognosis.
44. The medical examination conducted by the specialist was supplemented by additional information provided by doctors at the Hospital, including the results of analyses performed on patients. In particular, the specialist found the information supplied by Dr. Ihsan Al-Shama'a useful.

45. The patients examined and observed stated in interviews that they had been exposed on 30/31 March 1988 to the effects of a chemical substance. They said they had all realized that they had been affected by an aggressive chemical when their eyes started itching and they experienced lachrymation, photophobia, blepharospasm, rhinorrhea, thoracic oppression, erythema and pruritus; later vesicles had developed. In some cases (clinical histories of cases Nos. C-8, C-22, C-23 and C-27), the patients had lost consciousness. Case No. C-16 experienced urinary and fecal incontinence.

46. From the study undertaken it can be categorically concluded that the 39 patients examined as well as the 72 observed had been exposed to yperite (mustard gas).

47. Both loss of consciousness and incontinence can be ascribed to the psychical effects any aggression is likely to produce, but they can also be significant symptoms of poisoning with choline esterase-inhibiting substances. The increase in ocular and nasal secretions (no excessive sweating was reported) are also characteristic of that kind of poisoning, although they could also result from the effect of yperite on mucous membranes. No miosis or brachycardia has been reported, but respiratory difficulty has been a symptom. Patients did not, however, require treatment with atropine. All this seems to indicate that some patients may have been exposed not only to the effects of yperite but also to those of a choline esterase-inhibiting substance in small concentrations. Nevertheless, this could not be ascertained on the basis of the examination and available information.

B. General information

48. The patients whom I examined testified that they had been injured in the Halabja area on 30/31 March 1988 as a result of attacks with chemical agents, emanating from either an aerial bomb or, in fewer cases, artillery shells that had exploded between 2 m and 500 m away from where they were standing. In general, they had been able to protect themselves by covering their faces with gas masks. In most cases they had donned them immediately after the explosion, but in some others this had been done some time after the explosion had taken place. None had been wearing protective clothing.

49. On the basis of information provided to us in As Sulaymaniyah by Iraqi military authorities, the wounded soldiers who underwent examination by the team's medical specialist at Baghdad had been stationed in mountain-top positions north of Halabja at the time of the attacks. Those positions, we were told, had been hit by 20 artillery shells carrying chemical warheads in the night of 30 March and by chemical bombs from three aircraft during the morning of 31 March. Most of the wounded had been evacuated to the military hospital in As Sulaymaniyah and then on to the Al Rasheed Military Hospital at Baghdad.

50. According to the same source, yperite (mustard gas) had been the only chemical agent used and it had contaminated an area of 2 square kilometres. We were informed that the agent had been detected and analysed by specialized personnel using the Dragger system.

51. The Government of Iraq accorded timely and adequate protection for the mission. For security reasons the team was unable to travel to those locations in the Halabja area where the chemical weapons had allegedly been used on 30/31 March 1988.

C. Summary of findings

52. At the specific request of the Secretary-General, I visited Iraq between 8 and 11 April in order to conduct an investigation into the alleged use of chemical weapons in the Iran-Iraq conflict. The investigation was conducted at the Al Rasheed Military Hospital at Baghdad. I did not visit the area where the alleged attack had taken place.

53. My summary comments in relation to the present investigation are as follows:

(a) A medical examination of 39 patients admitted to Al Rasheed Military Hospital in Baghdad revealed they were suffering from conjunctivitis in different degrees, accompanied by photophobia, lachrymation and blepharospasm, as well as skin lesions including erythema, darkish-black pigmentation of skin and lesions resembling second-degree burns. Some had chemical tracheobronchitis and others leukopenia. These clinical findings allow us to affirm that these 39 patients had been affected by yperite (mustard gas);

(b) In four of the patients, such symptoms as coma, urinary and fecal incontinence, nasal and ocular hypersecretion, as well as a reduction in the acetylcholine esterase level indicate that, besides yperite, these patients may have been exposed to an acetylcholine esterase-inhibiting chemical in small concentrations;

(c) All 39 patients examined by the specialist as well as the 72 additional patients on whom a cursory medical observation was made - all military personnel - exhibited similar symptoms and therefore it could be concluded that all of them had been exposed to the effects of yperite (mustard gas).

VI. CONCLUSIONS

54. The following are the conclusions from my present investigation:

(a) On the basis of the clinical examinations I conducted in the Islamic Republic of Iran, I was able to determine that patients had been affected by chemical weapons. A considerable number of those affected were civilians;

(b) The main aggressive chemical used in these cases was yperite (mustard gas) but an acetylcholine esterase-inhibiting substance had also been used;

(c) On the basis of clinical examinations I conducted in Iraq, I was able to determine that the patients - all military personnel - had been affected by chemical weapons;

(d) The aggressive chemical used in these cases was yperite (mustard gas). There were some indications that an acetylcholine esterase-inhibiting substance may also have been used in small concentrations, but there was no conclusive evidence to that effect;

(e) It was not possible to make an independent determination in either of the two phases of the investigation of the extent of the use of chemical warfare agents and the means by which the chemical agents had been delivered;

(f) Testimony furnished by the patients I examined in both countries regarding the dates on which they had suffered the effects of chemical weapons was generally consistent with the findings of my medical investigation.

Notes

a/ S/16433.

b/ S/17127 and Add.1.

c/ S/17911 and Add.1 and Corr.1 and Add.2.

d/ S/18852 and Add.1.

e/ S/18855, S/18859, S/18860, S/18866 and Corr.1, S/18878, S/18890, S/18910, S/18928, S/18941, S/18947, S/18952, S/18953, S/18955, S/18956, S/18962, S/18966, S/18967, S/18973, S/18984, S/18986, S/18992, S/19006, S/19016, S/19029, S/19193, S/19312, S/19615 and Corr.1, S/19619, S/19621, S/19637, S/19639, S/19647, S/19648, S/19650, S/19664, S/19665, S/19669 (A/43/233), S/19680, S/19682 (A/43/239), S/19690, S/19696, S/19726 (A/43/279), S/19727 (A/43/280), S/19733 (A/43/281), S/19734 (A/43/282), S/19741 (A/43/288), S/19759, S/19762.

f/ S/18870, S/19730.

g/ S/17932, S/18305, SG/SM/3953, S/18863, SG/SM/4103.

h/ League of Nations, Treaty Series, vol. XCIV (1929), No. 2138, p. 65.

Appendix I

CHRONOLOGY OF ACTIVITIES

Sunday, 27 March 1988

Mission assembles in London

Departure from London (2230)

Monday, 28 March 1988

Arrival in Tehran (0700)

Meeting at the Ministry of Foreign Affairs with Mr. Hossein Lavasanni, Deputy Foreign Minister (1100)

Examination of, and interviews with, patients in Labbafi-Nejad and Baghiat Ullah hospitals, Tehran (1500-1930)

Tuesday, 29 March 1988

Examination of, and interviews with, patients at the Mofatteh Convalescence Centre, Tehran area (1000), and in the Loghman-al-Doleh Hospital, Tehran (1500)

Wednesday, 30 March 1988

Departure for Bakhtaran (0800)

Examination of, and interviews with, patients at a reception and monitoring centre for the classification of the wounded in Bakhtaran (1000)

Observation of, and interviews with, persons affected by chemical weapons in the villages of Nowdoshe and Nejmā

Return to Tehran (1900)

Thursday, 31 March 1988

Meeting at Maharab International Airport with Mr. Lavasanni, Deputy Foreign Minister (0800)

Departure from Tehran (1030); arrival in Geneva (2330)

Friday, 1 April 1988

Preparation of report

Saturday, 2 April 1988

Preparation of report

Sunday, 3 April 1988

Preparation of report

Monday, 4 April 1988

Preparation of report

Tuesday, 5 April 1988

Preparation of report

Wednesday, 6 April 1988

Preparation of report

Thursday, 7 April 1988

Departure from Geneva (1100)

Arrival in Baghdad (2323)

Friday, 8 April 1988

Examination of, and interviews with, patients in Al Rasheed Military Hospital, Baghdad (1000-1230)

Saturday, 9 April 1988

Examination of, and interviews with, patients in Al Rasheed Military Hospital, Baghdad (0900)

Sunday, 10 April 1988

Departure for As Sulaymaniyah (0830)

Briefing by military authorities of Iraq (1000-1200)

Return to Baghdad (1330)

Working dinner with Mr. Riyadh Al-Qaisi, Director of the Department of International Organizations, Ministry of Foreign Affairs (2000)

Monday, 11 April 1988

Departure from Baghdad (0830)

Arrival in Geneva (1425)

Tuesday, 12 April 1988

Preparation of report

Wednesday, 13 April 1988

Preparation of report

Thursday, 14 April 1988

Finalization of report

Friday, 15 April 1988

Mission disperses from Geneva

Appendix III

BREAKDOWN OF CASES EXAMINED IN THE ISLAMIC
REPUBLIC OF IRAN AND IRAQ

The cases listed in this appendix do not constitute a representative sample of the breakdown by these categories of the total number of those affected. Numbers in each group depended on the number of injured examined in each hospital or centre.

Table 1

Breakdown by aggressive agent

<u>Cases examined in the Islamic Republic of Iran</u>		<u>Cases examined in Iraq</u>	
Acetylcholine esterase-inhibiting agent	4	Yperite (mustard gas)	35
Yperite (mustard gas)	61	Yperite (mustard gas) and possibly also acetylcholine esterase- inhibiting substance	<u>4</u>
Total	<u>66</u>	Total	<u>39</u>
Yperite (mustard gas) that caused death	<u>1</u>		
Grand total	<u>67</u>		

Table 2

Breakdown by age, sex and status

<u>Cases examined in the Islamic Republic of Iran</u>				<u>Cases examined in Iraq a/</u>			
<u>Age group (in years)</u>	<u>Male</u>		<u>Female</u>	<u>Age group (in years)</u>	<u>Soldiers</u>	<u>Officers</u>	<u>Total</u>
	<u>Soldiers</u>	<u>Civilians</u>					
0 - 1	-	1	1	15 - 19	1	-	1
1 - 4	-	2	3	20 - 24	9	1	10
5 - 14	-	4	9	25 - 29	7	8	15
15 - 19	-	3	5	30 - 34	5	2	7
20 - 24	12	2	5	35 - 39	2	1	3
25 - 29	4	2	3	40 - 44	2	-	2
30 - 39	1	2	1	45 - 49	<u>1</u>	-	<u>1</u>
40 - 49	-	1	1				
50 - 59	-	1	-	Total	<u>27</u>	<u>12</u>	<u>39</u>
60 - 65	-	1	-				
Unknown	-	<u>2</u>	-				
Total	<u>17</u>	<u>21</u>	<u>28</u>				
Grand total			<u>66</u>				

a/ All cases examined in Iraq were male military personnel.

Table 3

Breakdown by locality and date of attack of cases examined in the Islamic Republic of Iran between 15 and 27 March 1988 a/

Locality	(Date in March)										Unknown	Total
	15	16	17	18	19	22	23	25	26	27		
Nowdoshe	-	-	3	-	-	-	3	-	-	-	1	7
Bayangan	-	-	1	-	-	-	-	-	-	-	-	1
Shaykh-Saleh	-	-	-	-	-	-	-	2	-	-	-	2
Halabja	1	12	10	7	1	-	-	-	-	-	4	35
Mavoot	-	-	-	-	-	1	1	-	-	-	-	2
Marivan	-	1	-	5	1	-	-	-	-	-	-	7
Sagan	-	-	1	-	-	-	-	-	-	-	-	1
Shakheshmiran	-	-	-	-	-	-	-	1	1	3	-	5
Allaa Aklar	-	-	-	1	-	-	-	-	-	-	-	1
Unknown	-	-	-	-	-	-	-	-	-	-	5	5
Total	<u>1</u>	<u>13</u>	<u>15</u>	<u>13</u>	<u>2</u>	<u>1</u>	<u>4</u>	<u>3</u>	<u>1</u>	<u>3</u>	<u>10</u>	<u>66</u>
Grand total												66

a/ Sixty-two cases examined in the Islamic Republic of Iran had been affected by yperite. Four cases (two in Halabja on 16 March and the other two in Marivan on 18 March) had been affected by a neurotoxic acetylcholine esterase-inhibiting agent. The patient from Shakheshmiran had symptoms that indicated he had been affected simultaneously by yperite and a neurotoxic agent.

All cases examined in Iraq were said to have been affected near Halabja on 30-31 March 1988.

All information contained in this table is based on the testimony of patients.

Table 4

Breakdown of cases examined in the Islamic Republic of Iran
 by locality and place of examination a/

<u>Locality</u>	<u>Place of examination</u>	<u>Number of patients</u>
Tehran	Labbafi-Nejad Hospital	11
Tehran	Baqhiat Ullah Hospital	9
Tehran (outskirts)	Mofatteh Convalescence Centre	14
Tehran	Loqhman-al-Doleh Hospital	26
Bakhtaran	Reception and monitoring centre	3
Nowdoshe	In the street	<u>3</u>
Total		<u><u>66</u></u>

a/ Three persons were observed in Nejmah but no medical examination was conducted for lack of time. In addition, 56 other patients were seen by the medical specialist but no medical history was taken or examination conducted.

(All 39 cases examined in Iraq were examined in Al Rasheed Military Hospital at Baghdad. A cursory observation was made of 72 additional cases at the same hospital.)

Table 5

Breakdown of cases examined in Iraq by type of weapon conveying
aggressive chemical and by distance from impact area according
to information supplied by patients

Distance from impact area	Type of weapon			
	Artillery shell	Aerial bomb	Missile	Unknown
0 - 10	4	5	2	1
11 - 50	1	11	1	1
51 - 100	2	3	-	-
101 - 500	-	2	-	1
Unknown	1	2	1	1
Total	<u>8</u>	<u>23</u>	<u>4</u>	<u>4</u>
Grand total				<u>39</u>

