

May 27, 2009
GHSAG Chemical WG Tokyo meeting and WS

TFD's Response to Hydrogen Sulfide Poisoning Incidents Caused by Detergents and Other Household Chemicals

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Number of Hydrogen Sulfide Poisoning Incidents in 2008

(Responses made by the TFD in its service area)

Responses made ... 105 cases

Where they occurred

- Apartments ... 61
- Houses ... 12
- Hotels ... 5
- Cars ... 14
- Outdoors ... 9
- Others ... 4



Casualties

Fatalities ... 106 (occurred in 98cases/in all 105cases)

Injured ... 55

Breakdown of the injured

- Suicides ... 7
- Family members ... 14
- Neighbors ... 16
- Employees ... 7
- Other ... 11



In many cases, hydrogen sulfide gas more than 120ppm was detected.

Incidents with Two or More Casualties

28 cases (26.7%)

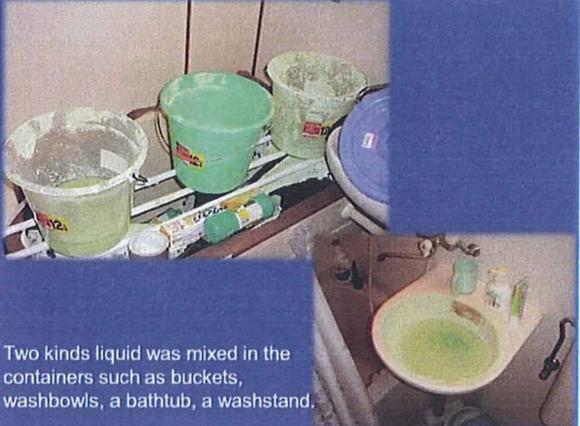
- Two or more fatalities ... 6 cases
- One fatality and injured person(s) ... 18 cases
- Two or more injured persons and no fatalities ... 4 cases



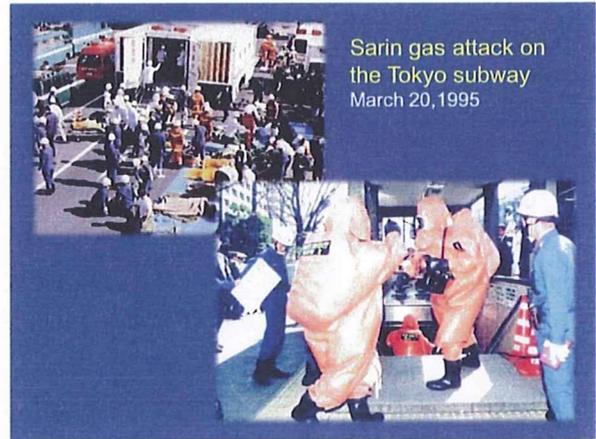
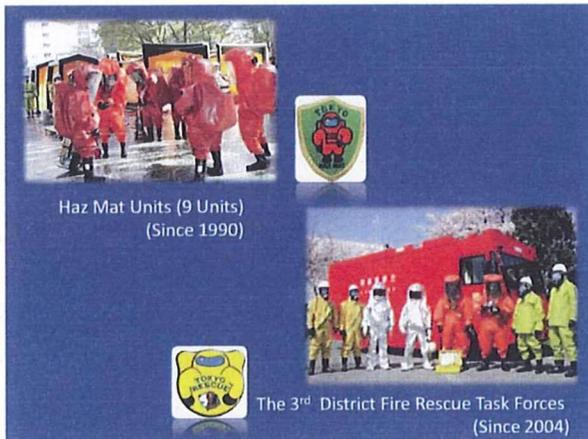
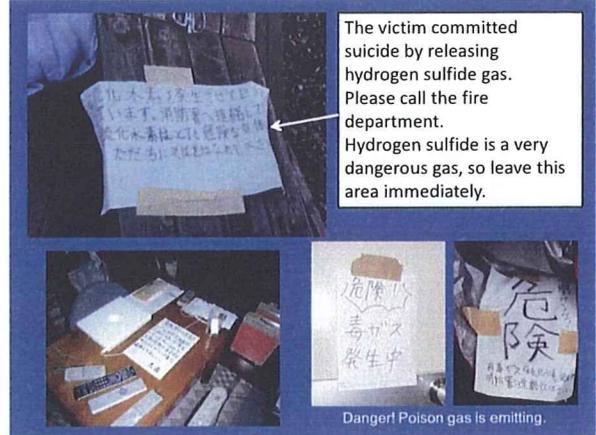
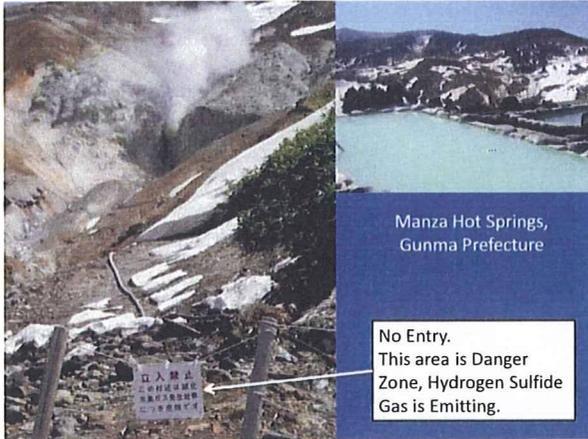
Acidic household detergent include hydrochloric Acid

Sulfur-containing bath agent

Sulfur-containing pesticide



Two kinds liquid was mixed in the containers such as buckets, washbowls, a bathtub, a washstand.



Actions of TFD's Fire Units

- Setting up control zones
- Gas identification and concentration measurement with devices
- Rescue of victims
- Decontamination of victims
- EMS treatments and transportation
- Evacuation of residents
- Ventilation of rooms
- Dilution & disposal of residual liquid

Unusual Case No.1 Hydrogen Sulfide Gas Generated from Victim's Mouth

- A man released hydrogen sulfide in his hotel room.
- He was discovered lying with his face in the basin which contained mixed liquids.
- Fire crew washed his head, removed clothes and carried him onto the ambulance.
- When EMS crew gave him CPR in the ambulance, hydrogen sulfide was detected in his breath.
- Rescue crew in SCBA (self-contained breathing apparatus) boarded the ambulance, conducted CPR while measuring the victim's breath on route to the hospital.
- Arriving in hospital, doctors gave him medical treatment outside.

資料4

Unusual Case No.2

During rescue of the victim, sulfide hydrogen emission started again after some interval.

- When fire crew arrived, sulfide hydrogen gas emission had almost stopped.
- While rescue crew were saving the victim, the container with two types of liquids was shaken, emitting the gas again.
- The liquids, separated in two layers, were moved and mixed, and started to react again.

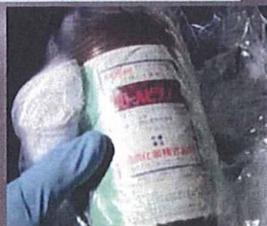
Tokyo Fire Department



THE CONTACT OF ONE POISONING PATIENT CASE AND MASS CASUALTY CHEMICAL INCIDENT

-THE SITE STUDY IN JRC KUMAMOTO HOSPITAL CHLOROPICRIN MASS CASUALTY INCIDENT-

Hideaki Anan MD,FJSIM
Hisayoshi Kondo MD
Tetu Okumura MD



- 21,May,2008 in JRC Kumamoto Hospital
- Site Research of Chloropicrin poisoning-mass casualty incident

Case

- 22:30 Information from EMT to the hospital
→a poisoning suicide man (35years old) took "Pikurin"(called locally)
- Hospital staff searched for "Pikurin" using reference books and in internet. But they could not search chloropicrin using the key word "Pikurin" . Only picric acid could be checked
 - Preparation : Standard Protection
 - 22:50 The patient was arrived at the hospital. Patient had been exposed in the site, but stimulant smell was felt .
 - Oxygen, monitoring, div, L/D , gastric lavage were performed.

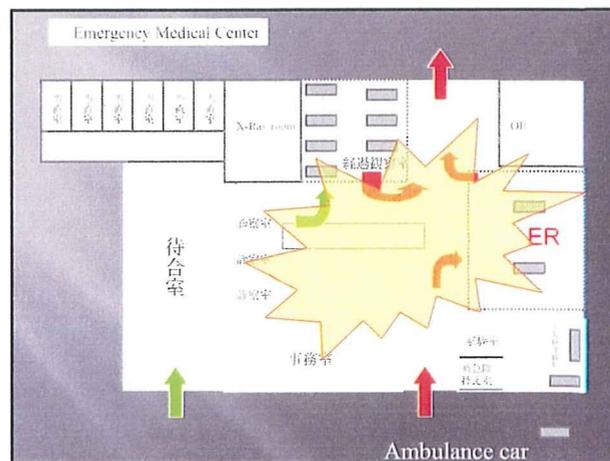
23:00 the patient vomited and stimulant smell was expanded in ER

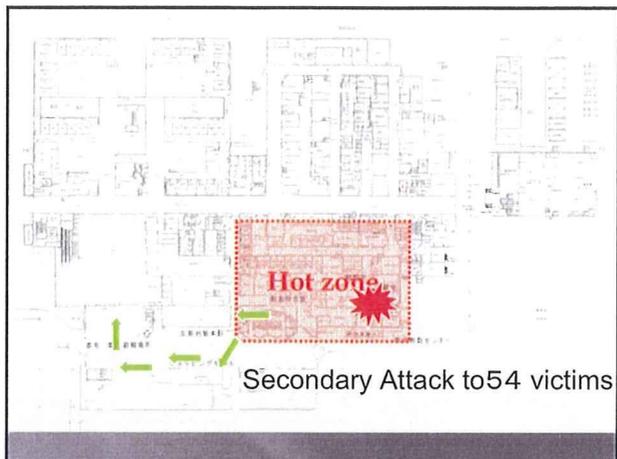
- 23 :00 When Stimulant smell was expanded, medical staff , other patients and there families in the ER had took much tears, sore throat, cough, dyspnea , nasal discharge ⇒ panic
- Emergency medical examination was stopped ⇒ all staffs, patients, there families were evacuated

23:06 All people had evacuated from ER and off-the-job hospital staff were called.

- 23:30 The suicide patient was dead.
- Symptomatic or contaminated 54victims
- other disease and trauma 23patients and families
 - 31 hospital staffs

- 10 victims admitted
5 victims admitted in this hospital(1 sever victim was compromised patient, not due to chloropicrin)
5 victims admitted in another hospital
44 victims had came back each homes, after looking and waiting for 4 hours.





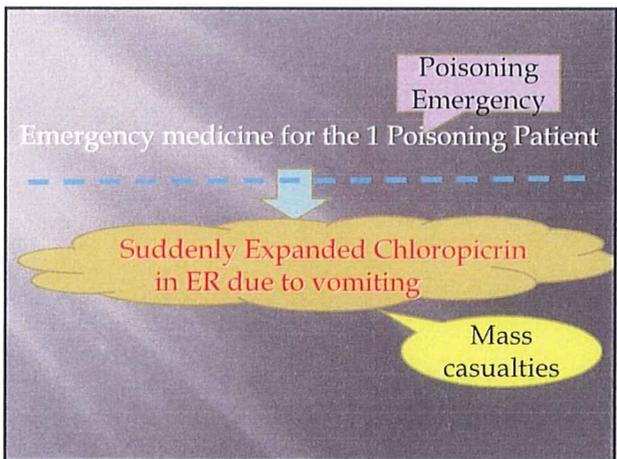
Problems in this Case

【Information】

- It was difficult that medical staff knew the information about chloropicrin, because one was called "Pikurin" locally. So, they could not search chloropicrin using internet.
- It was difficult to hold information in common between EMT and hospital staff.
- It was difficult that they had suspected very severe toxicity, so did not prepare enough.

【system・prepare】

- It was difficult that they expected to progress usual toxic emergency response to mass casualty incident by vomiting.
- No preparation can shut ER, evacuate victims and start protection system.



Usual preparation for CBRNE mass casualties

- Many decontamination drills were performed in this country for prevention of secondary CBRN contamination.
- We have believed in that Contamination would be occur out of hospital = many plan to prevent invasion hospital
- We can decontaminate only surface of body.

Discussion points

- Preparing for in- hospital CBRNE mass casualty incident
- Difficulty of decontamination of inner body
- If we must examine the patient who is taken unknown object, we should prepare expanding high risk object from inner body.

Measures 1

I. PPE

Level C =

- Use if the object is known
- It should not be used in Hot zone

Air line mask is useful by Pressed air in hospital

Measures 2

II. Place of Examination

Did you prepare for In-hospital CBRNE mass casualty incident ?

Can you shut ER suddenly ?

Can you change the place of medical examination

from in-hospital to out-hospital suddenly ?

CBRNE mass casualties

Command to evacuate, rout,
Call 911(119 in Japan)

Conclusion

- ❑ The contact of one poisoning patient case and mass casualty chemical incident
- ❑ Need for preparedness for in-hospital CBRNE incident (Hospital become the **Scene**)
- ❑ Need for preparedness of PPE, clinical manual etc, to estimate internal contamination

Overview of Food Contamination Incidents in Japan

27 May, 2009

Miyako Yamamoto,
National Institute of Health Sciences

Food contamination incidents in Japan

• Unintentional

Statistics of food poisonings, Japan
(Food poisoning reported to MHLW)

Cases:

- Bacteria and virus : > 90%
- Chemicals : < 1% (mainly, histamine poisoning)
- Natural toxin : < 2% (Deaths: > 70%)
(mainly, puffer fish and mushrooms)

National Institute of Health Sciences (NIHS)

Number of food poisoning reported to MHLW (Japan, 2004-2006)

	Outbreaks		Cases		Deaths	
	No.	%	No.	%	No.	%
Bacteria (Total)	2,991	63.6	39,422	41.8	5	27.8
Virus	1,056	22.5	48,961	52.0	0	0.0
Norovirus	1,050	22.3	48,880	51.9	0	0.0
Others	6	0.1	81	0.1	0	0.0
Chemical (*1)	41	0.9	582	0.6	0	0.0
Natural toxin (Total)	395	8.4	1,229	1.3	13	72.2
plants	260	5.5	1,010	1.1	8	44.4
animals	135	2.9	219	0.2	5	27.8
Others	20	0.4	39	0.0	0	0.0
Unknown	199	4.2	3,987	4.2	0	0.0
Total	4,702	100.0	94,220	100.0	18	100.0

MHLW: Ministry of Health, Labour and Welfare

*1 Mainly histamine poisoning by mackerel and tuna.

- Fall 2004,
Outbreak of acute encephalopathy of unknown etiology among patients with chronic renal failure, after eating "Sughiratake" mushroom (*Pleurocybella porrigens*) in northwest part of Japan.
Illness: 51, Deaths: 15 (JPIC, November 8, 2004)
- 2008
Rice contaminated with aflatoxin B₁ or containing pesticides above MRL for industrial use were illegally sold for food. ("Osenmai" incident)

National Institute of Health Sciences (NIHS)

Intentional food contamination incidents

- 1984-1985 Blackmail cases against several major food companies, claiming tampering of sodium cyanide in their food products in the shop.
- 1984.10-1985.11 Paraquat poisonings by tampered canned drinks sold in vending machines or at shop (Illnesses: > 18, Deaths: > 14)
- 1985 Imported wine, adulterated with diethyleneglycol

National Institute of Health Sciences (NIHS)

Intentional food contamination incidents (cont.)

- 1998.07.25 Acute arsenic poisonings by tampered curry served at a summer festival in Wakayama (Hospitalized: 67, Deaths: 4)
- 1998.08.10 Sodium azide poisonings by tampered hot water for tea at a company in Niigata city (Illnesses: 9)
- 1998.08-1998.12 Many cases of food contamination (cyanide, sodium azide, hypochlorite, pesticides and others), some of them are hoax (1 died by cyanide adulterated in canned tea)

National Institute of Health Sciences (NIHS)

Intentional Chemical incidents caused by toxic chemicals in Japan in 1984-1998
(Research following Wakayama curry poisoning case in 1998)

- 111 cases, collected mainly from newspaper database
- Chemicals
 paraquat : 25, cyanide : 16,
 pesticides(pyrethroids, unknown) : 12,
 hypochlorite : 6, sodium azide : 5,
 lacrimator : 4, chlorpicrin : 3, cresols : 3,
 arsenic compounds : 2, chloroform : 2,
 nerve agents(sarin:2, VX:3)
 others (phosgene, parathion, strychnine nitrate,
 thallium acetate, aconitine, cadmium compounds)
 @ Underlined: regulated by "Poisonous and Deleterious
 Substances Control Law"
 @ Sodium azide was designated as "poisonous substance"
 in 1999.

National Institute of Health Sciences (NIHS)

Intentional Chemical incidents caused by toxic chemicals in Japan in 1984-1998

- Place/situation
 -canned drink purchased from vending machines : 25,
 -canned or bottled drink purchased from shop : 18,
 -university/laboratory/hospital : 10
 -school : 11,
 -public space (station, subway, park etc) : 10,
 -internet : 2, others
- Food contamination incidents : About 80 cases
 (including murder and threats against food companies)

National Institute of Health Sciences (NIHS)

Intentional Chemical incidents caused by toxic chemicals in Japan in 1984-1998

Copycat poisoning

- 1984-1985
 paraquat poisoning (Illnesses: > 18, Deaths: >14)
- 1998.08-12 (just after Wakayama curry poisoning and Niigata sodium azide poisoning cases)
 Many intentional food contamination incidents with cyanide, sodium azide, hypochlorite, pesticides and others
 (Illnesses: > 30, Death: 1)
 (Some of them are hoax)
- 1998.08-11 Sodium azide poisoning cases : 5
- Fall 2001, "White powder" incidents after anthrax attacks in US. (Most of them are hoax.)

National Institute of Health Sciences (NIHS)

Intentional Chemical incidents caused by toxic chemicals in Japan in 1984-1998

Ease of Access

- Place : institute/university/hospital : 10 cases
 Easily accessible to chemicals
 (Sodium azide, cyanides, chloroform, cadmium compound, thallium acetate)
- Sodium azide poisoning case
 1998.08.10 First case at a company in Niigata
 1998.10-1998.11 : 4 cases (laboratory/institute/university)
 (1999 and 2008 : 2 cases at institute and university)
- Vending machines : 25 cases
 (1984.10-1985.11 : 15 cases, 1998.9-1998.11 : 9 cases)

National Institute of Health Sciences (NIHS)

Intentional food contamination incidents
(1999-)

- 2002 Serious liver injury caused by imported dietary supplement for weight loss, containing N-Nitroso fenfluramine (Illnesses: >400, Deaths: 3)
 (Dietary supplements containing fenfluramine were recalled and banned for sale in 1996.)



Fenfluramine



N-Nitroso fenfluramine

- (2007-)2008 Methamidophos poisonings by imported frozen dumplings
- 2008 Melamine contamination in Chinese milk and milk products

Case report of chemical events by food contamination

Lesson to learned from Japanese Incident by Imported Frozen Dumplings (Methamidophos poisoning)



Japan poison Information Center
 Yumiko Kuroki, Ph.D., Kaoru Iida,
 Toshiharu Yoshioka, M.D. Ph.D,
 Noriyoshi Ohashi, M.D.,
 Yayoi Hatano, Fujiko Iizuka, Yoko Endo,
 Hiroyuki Araki, Hironori Takano

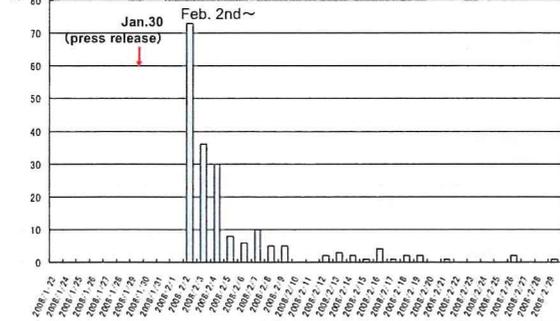
Methamidophos food contamination poisoning

An outbreak of food poisoning that affected at least ten people in various regions of Japan was traced to exposure to Chinese-made frozen dumplings contaminated with the organophosphate insecticide "Methamidophos" in January 2008.



On January 29 2008, the Tokyo metropolitan government reported to the Ministry of Health, Labor and Welfare (MHLW) that there had been suspected cases of organophosphate poisoning in Hyogo and Chiba prefectures. And that just before the onset of illness all of the patients had eaten frozen dumplings made by the same manufacturer and imported around the same time (November in the previous year) from China by the same company in Japan. The police investigation revealed that methamidophos was detected in the patients' vomit.

Inquiries concerning health hazard cases caused by Chinese-made frozen dumplings in the Ministry of Health, Labor and Welfare (MHLW) (2008/2/2~2008/2/29, 194 cal)



Number of reports and inquiries of prefectural and city governments after the announcement of health hazard caused by the Chinese-made frozen dumplings (January 30)

(from the material published by the MHLW, as of 15:00, March 31, 2008)

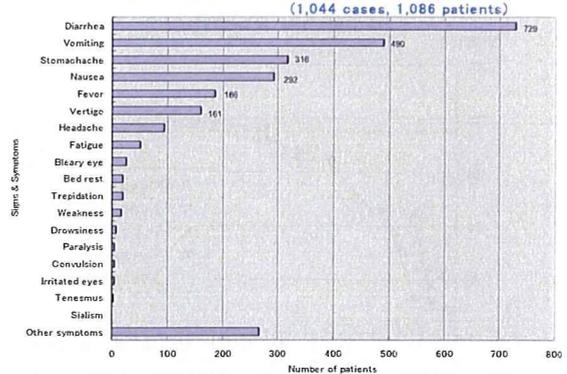
Prefecture	Number of patients confirmed to have organophosphate poisoning	Number of cases suspected of having organophosphate poisoning and currently under investigation		Number of cases whose suspicion of organophosphate poisoning was cleared		
		Hospitalized	Not hospitalized	Visited a medical institution ³	Did not visit a medical institution ³	Other ⁴
Chiba	7	0	0	63	148	41
Hyogo	3	0	0	45	95	47
Other	0	0	0	936	1,957	2,583
Subtotal	10	0	0	1,044	2,200	2,671
				Total 5,915		

Note 1: Cases to which all of the following apply:
 1) The patient has manifestations of organophosphate poisoning, such as neurological symptoms
 2) Decreased cholinesterase activity in the blood is observed
 3) Methamidophos is detected in the patients' vomit or from food
 * Although no test for 2) above was performed in two of the cases reported from Chiba, the people were treated as confirmed cases because the causal relationship between 1) and 3) seemed evident.
 Note 2: Cases in which symptoms suggestive of organophosphate poisoning, such as neurological symptoms, were observed.
 Note 3: Cases in which the patient complained of symptoms, but the suspicion was cleared by clinical diagnosis and/or test results.
 Note 4: Inquiry related to Chinese-made Frozen Dumplings and others.

Patients confirmed to organophosphate poisoning

Prefecture	Number of patients confirmed to have organophosphate poisoning	
Chiba 1 (2007 Dec. 23)	2	*The patient has mild manifestations of organophosphate poisoning, such as vomiting, diarrhea, diaphoresis etc. *Methamidophos is detected from the food (19,250ppm) (36-year-old woman, 3-year-old girl)
Hyogo (2008 Jan. 6)	3	*The patient has manifestations of organophosphate poisoning such as neurological symptoms. *Decreased cholinesterase activity in the blood is observed. *Methamidophos is detected in the patients' vomit or from food (13,200ppm) (18 year-old boy, 47 year-old woman, 51 year-old man)
Chiba 2 (2008 Jan. 22)	5	*The patient has manifestations of organophosphate poisoning such as neurological symptoms. *Decreased cholinesterase activity in the blood is observed. *Methamidophos is detected in the patients' vomit or from food (31,130ppm) (5 year-old girl, 7 year-old boy, 10 year-old boy, 18 year-old girl, 47 year-old woman)
Total	10	

Signs & Symptoms of patients who visited a medical institution (1,044 cases, 1,086 patients)



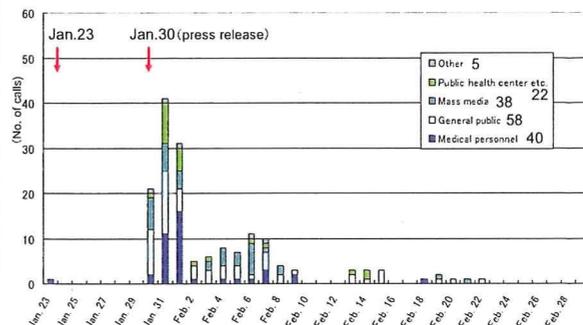
These cases in which the patient complained of symptoms, but the suspicion was cleared by clinical diagnosis and/or test results.

Methamidophos food contamination poisoning

- JPIC received a inquiry of organophosphate poisoning at **23rd Jan.** from a medical doctor before her patients arrived at the hospital.
- That case was turned out the most serious case (5 year-old-girl) caused by food contamination of methamidophos after a week at the time of press release.

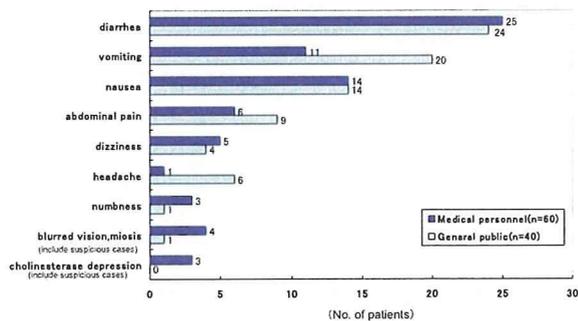
Inquiries concerning health hazard cases caused by Chinese-made frozen dumplings in JPIC

(2008/Jan./23~2008/Feb./29. 163 calls)



Number of patients with the presence of symptoms * [71 in 100 patients] (causal association has unknown)

* the presence of symptoms observed during the period from exposure to at the call



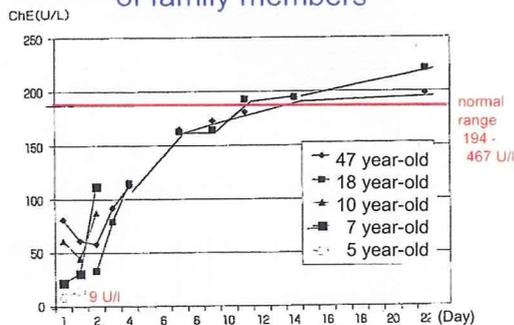
Chinese dumpling scare hits Japan - a case of methamidophos food poisoning

- The incident occurred in January 2008 in a family with one adult and four children after eating Chinese dumplings for dinner. Thirty minutes after dinner, all developed nausea, vomiting, and diarrhea.
- Dr. Sumi et al. experienced the most serious case, a five year-old girl, who suffered coma. She presented with features of cholinergic overactivity (miosis, bronchorrhea, hypersalivation) and her serum cholinesterase activity was 9 U/l (normal range, 194-467 U/l).
- They started intravenous treatment with pralidoxime iodide, atropine sulfate, and midazolam. Her symptoms improved gradually and she was discharged on day 25 without any complications.

JPIC received this case

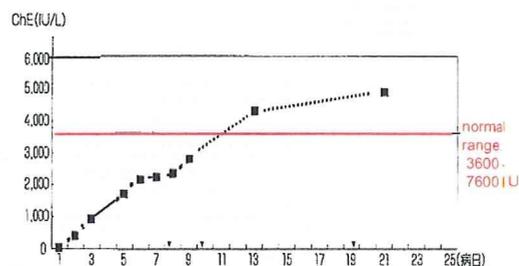
Y Sumi, Y Oode and H Tanaka: J. Toxicol. Sci., 33, 485-486, 2008.

Serum cholinesterase activity of family members



Y Oode, T Yoshihara, Y Sumi, et. Al.: Jpn. J. Clin. Toxicol., 22, 48-50, 2009.

Serum cholinesterase activity 5 year-old-girl



Y Oode, T Yoshihara, Y Sumi, et. Al.: Jpn. J. Clin. Toxicol., 22, 48-50, 2009.

Chinese dumpling scare hits Japan
- a case of methamidophos food poisoning

- Though poisoning attributed to organophosphate insecticides has become less common in recent years, it is even more important to diagnose the problem rapidly based on the characteristic symptoms and to start specific treatment at the earliest possible stage after poisoning.

JPIC received this case

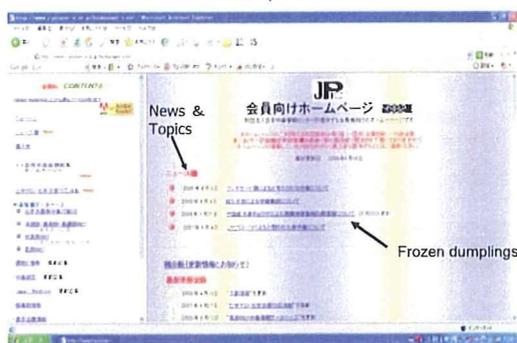
Y Sumi, Y Oode and H Tanaka: J. Toxicol. Sci., 33, 485-486, 2008.

Diagnostic System based on Clinical Signs & Symptoms

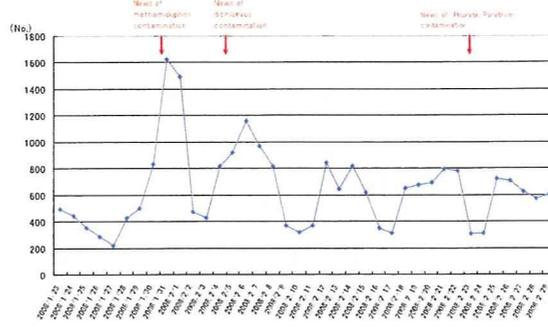
Covered substances: Poisonous & deleterious substances controlled by the Law (75 groups, 488substances)
Effective antidotes available
Used in the past events and incidences



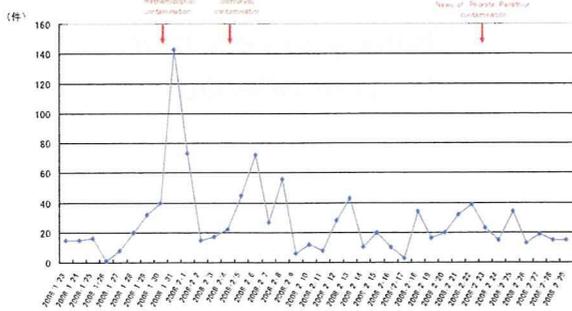
The top page of JPIC website for medical profession



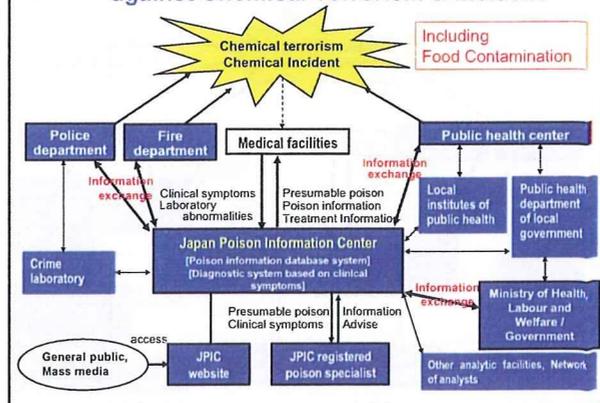
Number of accesses of Japan Poison Information Center Website (Jan. 23rd~2008 Feb. 29th in 2008)



Number of accesses of Japan Poison Information Center Website for medical profession (Jan. 23rd~2008 Feb. 29th in 2008)



JPIC Framework against Chemical Terrorism & Incident



Action of the MHLW **Response by governments**

Improvement measures implemented

- Prefectural and city governments were asked to establish a system to assess the public health risks promptly by securing **24-hour, 365-day operation of public health departments** in response to the emergency and to ensure compliance with the responsibility to report food poisoning cases stated in Article 58 of the Food Sanitation Law.
- Revised Article 73 and Table 17 of Enforcement Regulations of the Food Sanitation Law to include new conditions **"in case patients with serious symptoms are reported"** and **"in case the poisoning is caused by a chemical substance,"** in addition to the current conditions requiring prompt reporting, such as "the poisoning has arisen from the consumption of imported food."

Action of the MHLW **Response by food-related business operators**

Improvement measures implemented

- Revised the *Guidelines on Management and Operation Standards to be Observed by Food-Related Business Operators* to **add a condition providing that food business operators should report to the public health department immediately** when they receive claims of damage to health from consumers or food hazard information about food in breach of the Food Sanitation Law.
- Prepared and published *"the Guidelines on Hygiene Control of Import Processed Foods"* to address problems related to imported processed foods.

Action of the MHLW **Response by the medical institutions and Initial action to be taken in case of food poisoning**

Response by the medical institutions

Improvement measures implemented

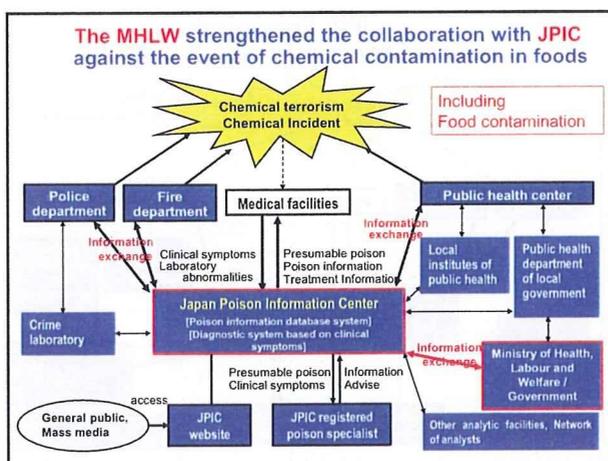
- Requested of medical institutions through the Japan Medical Association and prefectural and city governments to **ensure compliance with the responsibility to report food poisoning** stated in Article 58 of the Food Sanitation Law.

Initial action to be taken in case of food poisoning

Improvement measures implemented

- **Developed a testing method for organophosphorus pesticide residue in processed foods.**
- Revised Article 73 and Table 17 of Enforcement Regulations of the Food Sanitation Law to add a new condition, **"in case the poisoning is caused by a chemical substance"** to the current provisions for prompt reporting.

Action of the MHLW **New e-mail reporting system of health hazard/poisoning by foods**



Thank you very much for your attention !!

Table 1 Number of reports and inquiries of prefectural and city governments after the announcement of damage to health caused by the Chinese-made frozen dumplings (January 30)

(from the material published by the MHLW, as of 15:00, March 31, 2008)

Prefecture	Number of patients confirmed to have organophosphate poisoning ¹	Number of cases suspected of having organophosphate poisoning and currently under investigation ²		Number of cases whose suspicion of organophosphate poisoning was cleared		
		Hospitalized	Not hospitalized	Visited a medical institution ³	Did not visit a medical institution ³	Other ⁴
Hokkaido	0	0	0	52	147	52
Aomori	0	0	0	36	137	14
Iwate	0	0	0	1	6	5
Miyagi	0	0	0	5	18	37
Akita	0	0	0	7	15	15
Yamagata	0	0	0	5	5	12
Fukushima	0	0	0	16	54	45
Ibaraki	0	0	0	36	114	71
Tochigi	0	0	0	19	37	8
Gunma	0	0	0	16	13	46
Saitama	0	0	0	112	149	64
Chiba	7	0	0	63	148	41
Tokyo	0	0	0	79	103	376
Kanagawa	0	0	0	15	38	117
Niigata	0	0	0	6	16	33
Toyama	0	0	0	0	0	2
Ishikawa	0	0	0	7	11	6
Fukui	0	0	0	0	1	4
Yamanashi	0	0	0	7	12	11
Nagano	0	0	0	10	4	1
Gifu	0	0	0	6	6	93
Shizuoka	0	0	0	15	39	16
Aichi	0	0	0	41	88	19
Mie	0	0	0	3	17	33
Shiga	0	0	0	21	25	102
Kyoto	0	0	0	16	37	232
Osaka	0	0	0	68	121	373
Hyogo	3	0	0	45	95	47
Nara	0	0	0	11	19	70
Wakayama	0	0	0	1	8	12
Tottori	0	0	0	1	7	0
Shimane	0	0	0	0	0	2
Okayama	0	0	0	12	12	2
Hiroshima	0	0	0	20	39	48
Yamaguchi	0	0	0	4	2	12
Tokushima	0	0	0	8	14	19
Kagawa	0	0	0	8	12	14
Ehime	0	0	0	5	8	20
Kochi	0	0	0	4	10	11
Fukuoka	0	0	0	129	206	106
Saga	0	0	0	0	0	41
Nagasaki	0	0	0	19	73	188
Kumamoto	0	0	0	17	41	48
Oita	0	0	0	27	64	29
Miyazaki	0	0	0	15	51	58
Kagoshima	0	0	0	25	61	61
Okinawa	0	0	0	31	117	55
Subtotal	10	0	0	1,044	2,200	2,671
				Total 5,915		

Note 1: Cases to which all of the following apply:

- 1) The patient has manifestations of organophosphate poisoning, such as neurological symptoms
- 2) Decreased cholinesterase activity in the blood is observed
- 3) Methamidophos is detected in the patients' vomit or from food

* Although no test for 2) above was performed in two of the cases reported from Chiba, the people were treated as confirmed cases because the causal relationship between 1) and 3) seemed evident.

Note 2: Cases in which symptoms suggestive of organophosphate poisoning, such as neurological symptoms, were observed.

Note 3: Cases in which the patient complained of symptoms, but the suspicion was cleared by clinical diagnosis and/or test results.

Note 4: Inquiry related to Chinese-made frozen gyoza and others

Table 2 Signs & Symptoms of patients who visited a medical institution
(1,044 cases, 1,086 patients)

(from the material published by the MHLW)

Symptoms observed (multiple answers allowed)	Number of patients with symptoms	Percentage
Diarrhea	729	67.10%
Vomiting	490	45.10%
Stomachache	318	29.30%
Nausea	292	26.90%
Fever	186	17.10%
Vertigo	161	14.80%
Headache	94	8.70%
Fatigue	51	4.70%
Bleary eye	26	2.40%
Trepidation	19	1.70%
Bed rest	19	1.70%
Weakness	16	1.50%
Drowsiness	7	0.60%
Convulsion	5	0.50%
Paralysis	5	0.50%
Tenesmus	3	0.30%
Irritated eyes	4	0.40%
Sialism	0	0.00%
Other symptoms	267	24.60%
Total	1,086	100.00%

Signs & Symptoms of patients who visited a medical institution
(1,044 cases, 1,086 patients)

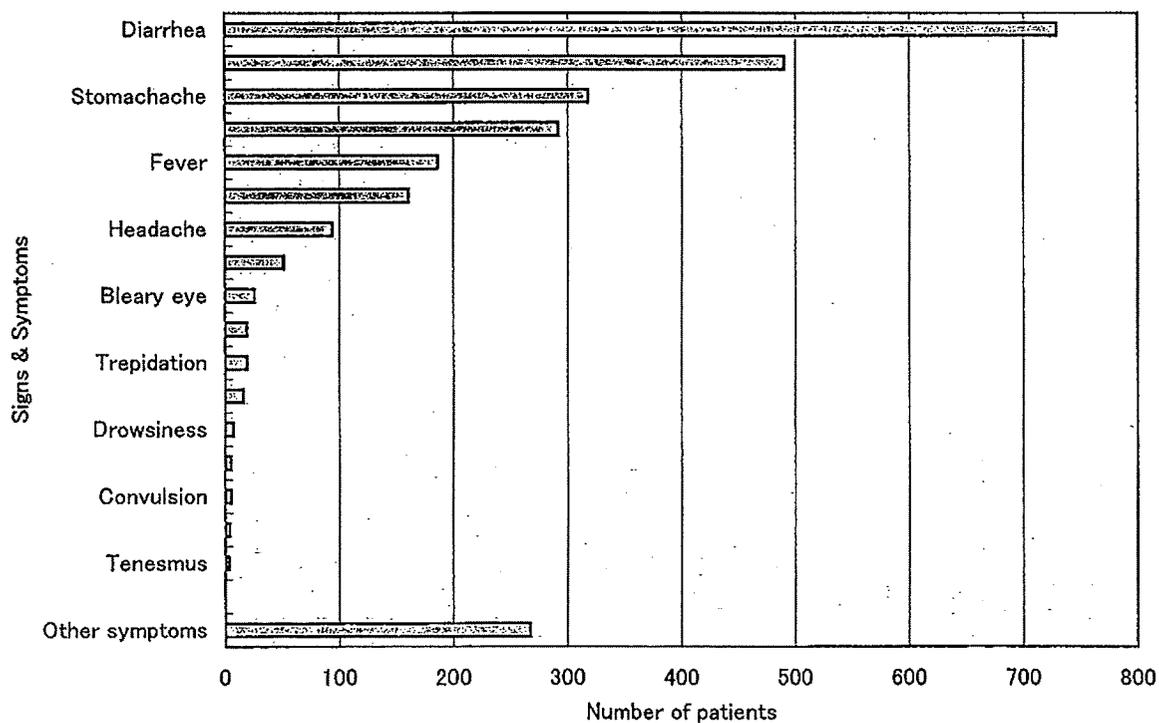


Table 3 Hospitalization of the patients who visited a medical institution and their diagnoses (1,086 patients)

(from the material published by the MHLW)

Diagnosis	Hospitalized	Not hospitalized	Unknown	Total
Gastroenteritis	8	28	56	92
Common cold	1	24	54	79
Infectious gastroenteritis	2	7	19	28
Nothing abnormal detected		7	8	15
Vomiting and diarrhea		2	7	9
Norovirus infection	1	1	6	8
Influenza		3	3	6
Sickness caused by food			5	5
Organophosphate poisoning denied	2	1	2	5
Association with eating gyoza denied	1	1	2	4
Food poisoning denied		1	2	3
Urticaria		3		3
Reflux esophagitis		1	2	3
Infection		1	1	2
Diarrhea		2		2
Suspected food poisoning			2	2
Vertigo		2		2
Other diagnoses	5	12	23	40
Acute organophosphate poisoning			1	1
Common cold, possibly organophosphate poisoning			1	1
Suspected pesticide poisoning		2		2
Suspected poisoning			1	1
Suspected irritable bowel syndrome but drug poisoning cannot be denied			1	1
Involvement of pesticide cannot be denied			1	1
Unknown	1	22	30	53
Other (entry other than diagnosis)		7	11	18
Not mentioned	17	196	487	700
Total	38	323	725	1,086

**Case-based study:
“The Deadly Christmas Sweets Incident”**

(International food contamination)

Background:

- “Christmas” is A Christian feast commemorating the birth of Jesus.
- “Christmas” can be a target of religious fundamentalists.
- “Christmas sweets” are produced all over the world and go into circulation internationally.↑

Onset

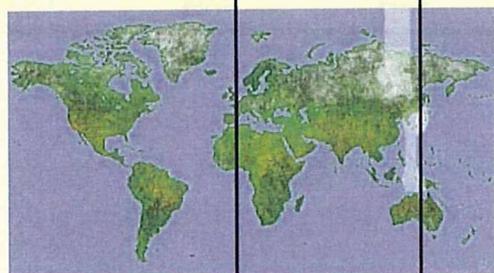
- In the night of Dec 24, 200X, all over the country A, many people were complained of frequent nausea, vomit, fasciculation. At least 600 victims were affected.
- At the early stage cause of sickness was unknown. Epidemiological intervention showed all victims took “Christmas Assorted Sweets.” The country A’s Government told WHO that “Christmas assorted sweets.” was the one of the suspicious cause.



World-wide influence

- Before alarming from the country A, “The Christmas Assorted Sweets” was started to be taken all over the world according to the time .

**Time Limits
European countries has only 9 hours!**



Nine Hours

The criminal group claimed responsibility for the attacks on the Internet.

We sent Special Christmas Gifts for YOU, Ho, Ho, Ho!

The Fact

- Some religious fundamentalists invaded into a sweets factory, and put organophosphorus agrichemicals into chocolate brandy ball in the country B in Asia.

Discussion Points

- #1 How to prevent spreading of ruins due to food contamination
- #2 International collaboration against chemical contamination
- #3 Food safety across the borders.

中毒情報センターから

日本中毒情報センターにおける
硫化水素中毒に関する受信状況および対応

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荒木浩之, 高野博徳, 大橋教良, 吉岡敏治, 中田義隆
財団法人日本中毒情報センター

はじめに

硫化水素による中毒は、自然界では火山や温泉地で被害に遭うほか、工場や下水道で作業中に曝露することが以前からよく知られている^{1,2)}。また、硫黄含有製品と酸性の製品を誤って混合し、発生した硫化水素により中毒に至った事故などの報告もある³⁾。

2007年、硫黄含有製品と家庭用洗剤などを用いて硫化水素を発生させ自殺を図る方法がインターネット上に掲載され、その方法を用いたと思われる自殺事例が散発しはじめた⁴⁾。その後2008年春に自殺事例は急増し、警察庁の発表⁵⁾によると2008年1月～5月末までに硫化水素による自殺で517人が死亡するという、大きな社会問題となった。

2003年頃から練炭による集団自殺事例も数多く報道されていた⁶⁾が、今回の硫化水素による自殺事例がより大きな社会問題となった一因として、自殺を図った当事者以外に、周辺住民や患者を救出し搬送する消防関係者、患者が搬送された医療機関で治療にあたる医療従事者などへの二次被害が多く発生している⁷⁾ことが考えられる。

2008年、日本中毒情報センター(以下、JPICと略す)へも、消防や医療機関などから、硫化水素中毒に関する問い合わせが急増した。そこで今回は、硫化水素中毒に関するJPICの受信状況、受信症例、JPICにおける対応などについて報告する。

1. 方法

1) JPIC 受信状況

対象は2008年1月～6月にJPICが受信した硫化水素に関する問い合わせ163件とした。なお、今回集計した件数は、患者が発生した急性中毒に関する問い合わせ(53件)に、中毒患者は発生していないが、対処方法の確認などに関する問い合わせ(110件)を加えた。

2) JPIC 受信症例

2008年1月～6月までにJPICが受信した硫化水素に関する医療機関からの急性中毒の問い合わせ39件中、追跡調査し得た16件(17症例)を対象とした。

3) JPIC および関連諸機関の対応

硫化水素による自殺事例に対するJPICおよび関連諸機関の対応について、ホームページ、新聞報道などから調査した。

2. 結果

1) JPIC 受信状況

図1に1998年～2007年までの硫化水素による急性中毒問い合わせ件数を示す⁸⁾。また、図2に2008年1月～6月の月別問い合わせ件数(対処方法の確認などに関する件数を含む)を示す。

JPICへの硫化水素の急性中毒に関する問い合わせは年間10件前後である。しかし、2008

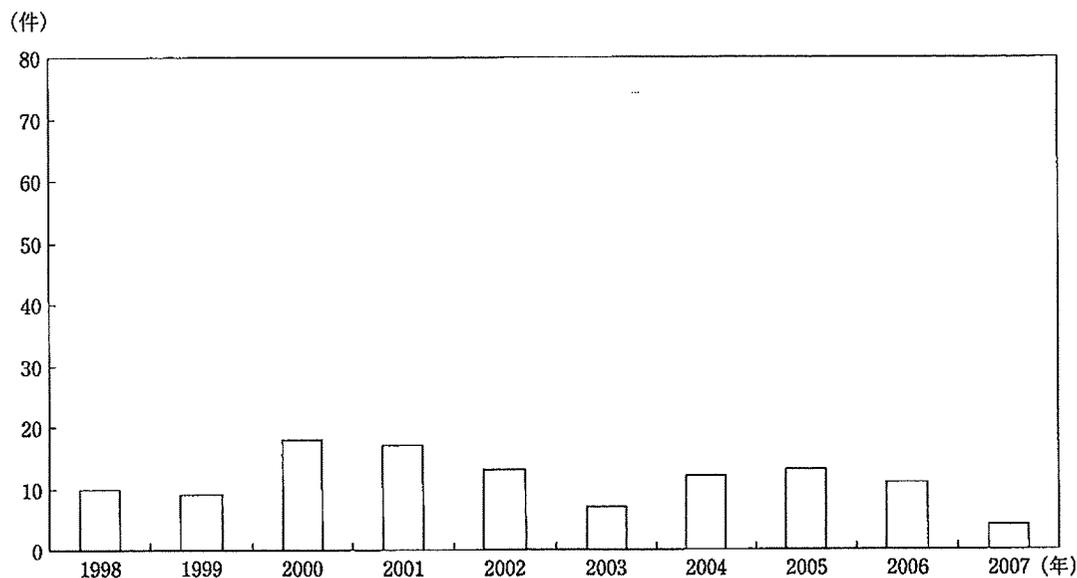


図1 硫化水素に関する急性中毒問い合わせ件数(1998年～2007年, 計114件)

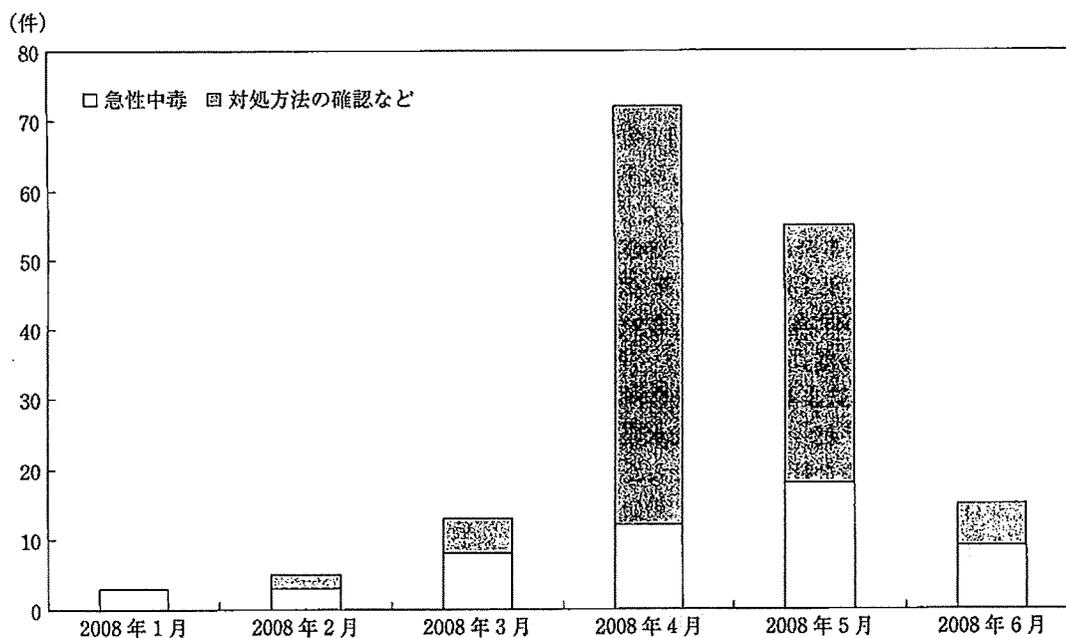


図2 硫化水素に関する問い合わせ件数(2008年1月～6月, 計163件)

年3月は13件, 4月は72件, 5月は55件, 6月は15件と硫化水素に関する問い合わせが急増した。連絡者の内訳は医療機関が64件と最も多く, ついで消防36件, 一般市民22件, 行政・保健所12件, その他(警察, マスコ

ミなど)29件であった。

月別の問い合わせ件数がとくに多かった2008年4月と5月の連絡者別問い合わせ件数を図3, 4に示す。通常, JPICへは医療機関や一般市民からの問い合わせが多くを占めるが,

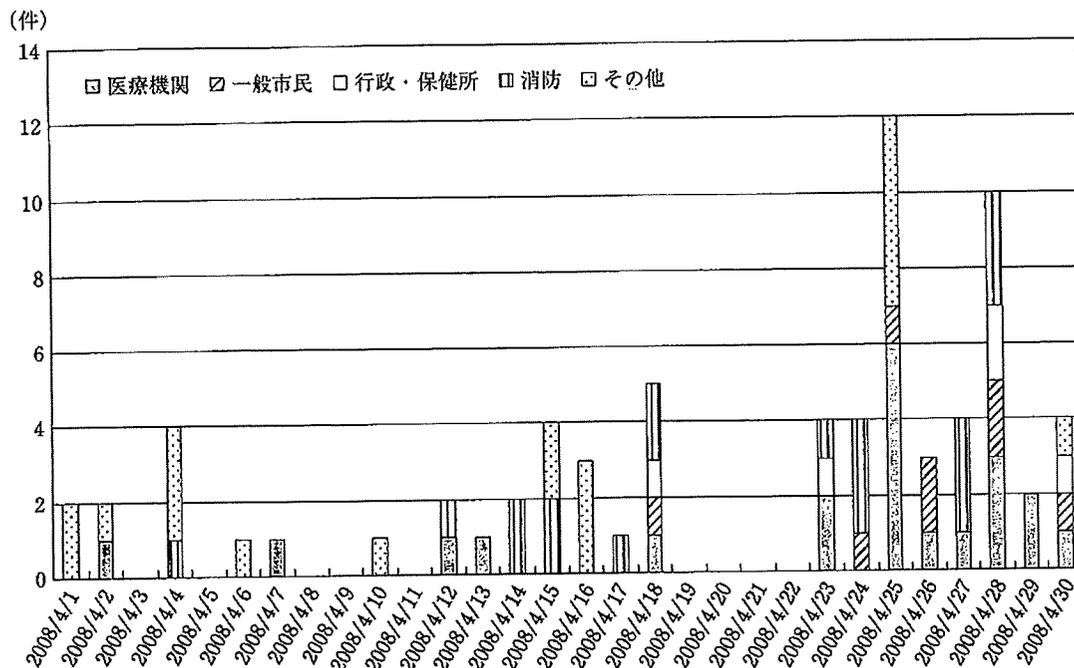


図3 連絡者別硫化水素に関する問い合わせ件数(2008年4月, 計72件)

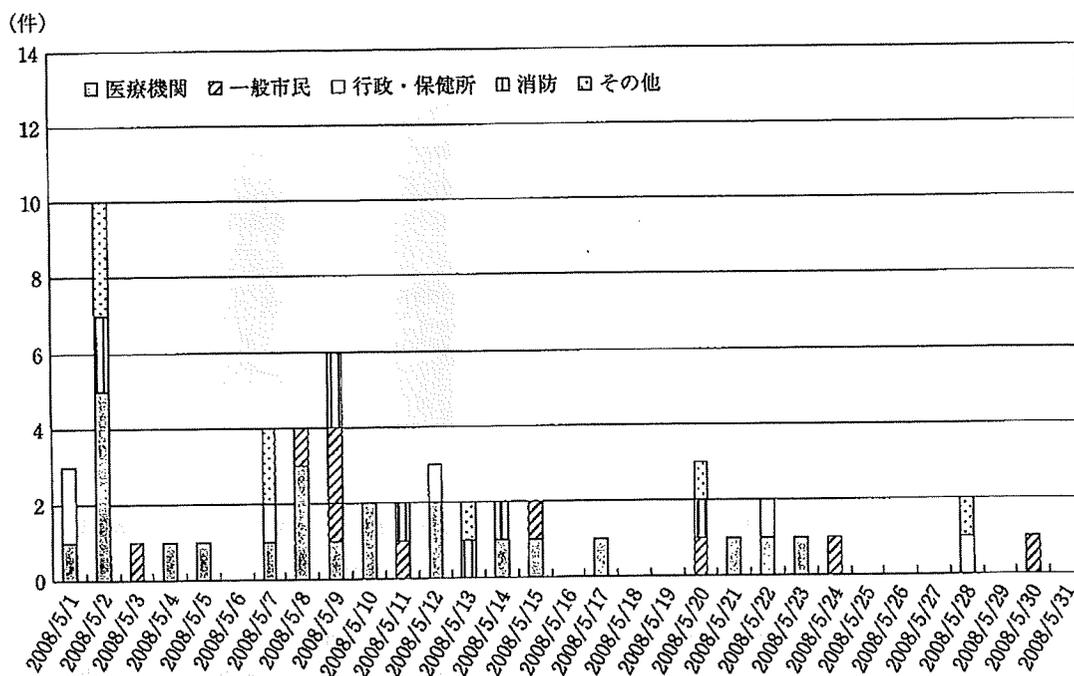


図4 連絡者別硫化水素に関する問い合わせ件数(2008年5月, 計55件)