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Epidemiologic Notes and Reports

Acute Hemorrhagic Conjunctivitis — Florida

Additional cases of acute hemorrhagic conjunctivitis (AHC) have recently been reported from 2 areas in Florida.

In the period September 4-September 21, 1981, the Monroe County Health Department received reports that 362 cases of illness compatible with AHC had occurred in the municipality of Key West, Florida. An initial survey of 78 families reporting to the health department for treatment revealed a total of 129 cases. Ninety-eight (76%) of the patients were black, 25 (19%) were white, and 6 (5%) were Hispanic. Seventy-five patients (58%) were female, and 54 (42%) were male. Patients ranged in age from 9 months to 75 years. The geographic distribution of the 78 families surveyed was confined to 2 of 40 census tracts, and most cases occurred in 2 neighboring housing projects. Cases continue to occur at the same rate.

Beginning on September 8, cases of AHC were reported from Dade County, Florida. The Department of Ophthalmology, University of Miami, continues to report 15-65 cases per day. A total of 259 cases were seen between September 15 and September 21. A review of 57 patients selected at random revealed that 93% had bilateral conjunctival injection and irritation, 91% had subconjunctival hemorrhage, 96% had excessive tearing, 77% had preauricular lymphadenopathy, and 66% had lid edema; none of the patients had fever or symptoms of upper respiratory infection. These 57 patients ranged in age from 9 weeks to 81 years; 92.6% were black and 5.4% were white; female:male ratio was 1.7:1. The incubation period is estimated to be less than 24 hours in most cases, and the secondary attack rate for affected families is high.

Reported by J Easton, ARNP, HO Garcia, MD, Monroe County Health Unit; RK Forster, MD, V Sklar, MD, D Bode, MD, W Culbertson, MD, Miami; MB Enrique, MD, MPH, RA Morgan, MD, MPH, Dade County Health Department; RA Gunn, MD, MPH, State Epidemiologist, Florida Department of Health and Rehabilitative Svcs; Pan American Health Organization, Washington DC; World Health Organization, Geneva, Switzerland; Viral Diseases Div, Center for Infectious Diseases, Field Services Div, Epidemiology Program Office, CDC.

Editorial Note: Extensive outbreaks of AHC have been reported this year from India and Latin America (*1*). At this time, health officials from only Miami and Key West, Florida, have reported significant outbreaks in the United States (*2*). Factors influencing spread in the United States are, as yet, unknown; however, it is believed that high-density

Hemorrhagic Conjunctivitis — Continued

coastal populations in humid areas are at higher risk. Good hand-washing practices have prevented spread among medical personnel and should also be encouraged among contacts of patients with AHC. Because the duration of illness is usually less than 1 week, and no long-term ophthomologic sequelae have been reported, the best treatment is supportive. Physicians are encouraged to report outbreaks of conjuctivitis consistent with AHC to their local and state health departments.

References

1. CDC. Acute hemorrhagic conjunctivitis — Latin America. MMWR 1981;30:450-1.
2. CDC. Acute hemorrhagic conjunctivitis — Key West, Florida. MMWR 1981;30:463-4.

Dermatitis of the Scalp Associated with the Installation of Ceramic Wool Fiber (Kao-wool) Insulation in a Nuclear Power Station — Ohio

In September 1980, the National Institute for Occupational Safety and Health (NIOSH) conducted a clinical and environmental evaluation involving 24 guards and 28 other workers at a nuclear power station, because of a history of dermatitis of the scalp within the preceding 2 years. Disease typically started at the point where the occipital scalp had contact with the plastic inner liner of a hard hat. One case had progressed to folliculitis that necessitated treatment with topical and systemic antibiotics and steroids. No significant differences were found between patients and nonpatients with respect to age, sex, race, history of allergy, shampoo use, length of employment, glove use, frequency of positive scalp cultures, or use of a hard hat.

Cases of scalp dermatitis had occurred in 2 waves—5 in the summer of 1978, and 27 in the spring and summer of 1980; 4 other cases were reported sporadically. Cases occurred with nearly uniform frequency among all occupational groups surveyed except clerical workers and power plant operators. Further questioning indicated that both peaks in cases had coincided with periods of installation of Kao-wool, a ceramic wool fiber (and asbestos substitute) used as insulation in the power station. Except for clerks and power plant operators, who spent most of their time in enclosed control rooms, all workers interviewed reported contact with Kao-wool. Dermatitis was confirmed for 24 of the workers by physical examination.

Gravimetric analysis of personal breathing-zone air samples taken 10 days after the latest phase of Kao-wool installation was completed revealed no detectable airborne exposures. Additionally, inspection of ledges, rafters, and other relatively inaccessible areas revealed no visible accumulation of fibers.

Reported by DC Maiwald, MD, Toledo; Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, NIOSH, CDC.

Editorial Note: Synthetic mineral fibers may be made from glass, slag, or kaolin by stream-jet fiberization to produce a fiber that may vary from $< 1\ \mu$ to $> 20\ \mu$ in diameter and may be as long as 10 cm (*1*). These fibers, unlike asbestos, break only transversely; thus they maintain their original diameter when cut or manipulated. Most investigations of synthetic mineral fibers have focused on possible respiratory or carcinogenic effects. Results of epidemiologic investigations to date have shown only upper respiratory

Dermatitis — Continued

irritation without significant lung involvement, while animal studies have demonstrated tumor production when fibers were injected directly into the pleura and peritoneum of rats (*2*). In addition, glass fibers with diameters of 0.5 μ have been shown to produce mesothelioma in laboratory animals (*3*). Dermatologic effects of exposure to synthetic fibers have also been well described previously, including reports of itching erythema in areas of skin exposed to fibers in the 5- to 20-μ range (*4*). Secondary infection or folliculitis is a rare complication of fibrous glass dermatitis (*5*). Persistent, irritant dermatitis such as that reported here has not been described previously, nor has scalp dermatitis been associated previously with Kao-wool. Possible explanations for this outbreak include the installation of Kao-wool blankets without impermeable covering, mandatory use of hard hats in areas of high termperature (which led to profuse sweating), and electrostatic attraction of airborne fibers such as Kao-wool to plastic hard hats and hard-hat liners.

References

1. Pundsack F. Fibrous glass–manufacture, use, and physical properties. In: Occupational exposure to fibrous glass: a symposium. Rockville, Md: National Institute for Occupational Safety and Health, 1976:11-8. (DHEW publication no. [NIOSH] 76-151).
2. Hill JW. Man-made mineral fibers. J Soc Occup Med 1978;28:134-41.
3. Wagner JC, Berry G, Skidmore JW. Studies of the carcinogenic effects of fiberglass of different diameters following intrapleural inoculation in experimental animals. In: Occupational exposure to fibrous glass: a symposium. Rockville, Md: National Institute for Occupational Safety and Health, 1976:193-7. (DHEW publication no. [NIOSH] 76-151).
4. Possick PA, Gellin GA, Key MM. Fibrous glass dermatitis. Am Ind Hyg Assoc J 1970;31:12-5.
5. Lucas J. The cutaneous and ocular effects resulting from worker exposure to fibrous glass. In: Occupational exposure to fibrous glass: a symposium. Rockville, Md: National Institute for Occupational Safety and Health, 1976:211-9. (DHEW publication no. [NIOSH] 76-151).

Salmonellosis from Homemade Ice Cream — Georgia

On May 28, 1981, homemade ice cream was served with cake to 25 children ages 4-6 years at a school party in Lamar County, Georgia. Over the next 4 days, 20 (80%) of the children and 2 of 4 adults at the party became ill with fever and diarrhea. All had temperatures ranging from 102 F to 106 F (38.9 C-41.1 C); other symptoms reported were abdominal cramps (91%), nausea (68%), vomiting (68%), headache (64%), muscle aches (41%), sore throat (27%), bloody stools (18%), and cough (18%). The illness began a median of 29 hours (range 18-94) after the party. Seventeen persons were seen by physicians, and 3 were hospitalized. *Salmonella typhimurium* was isolated from stool specimens obtained from 4 patients.

No food was left over for culture; however, ice cream custard was considered the vehicle of transmission since it was prepared from uncooked ingredients, and baked food items have rarely been associated with salmonellosis. The ice cream was made from vanilla, sugar, pasteurized milk and cream, and raw eggs. Some of the eggs had been obtained directly from local farms.

A follow-up investigation in 19 households of the children who had been ill showed that, in the month after the party, 3 (5%) of 61 other household members had an illness characterized by fever and diarrhea; *S. typhimurium* was isolated from 1 individual. This

Salmonellosis – Continued

second group of infections involved children ages 2, 7, and 8 years for a 20% secondary attack rate for persons 1-9 years old.

Reported by JD Smith, BS, RK Sikes, DVM, MPH, State Epidemiologist, Georgia Dept of Human Resources; Field Services Div, Epidemiology Program Office, Enteric Diseases Br, Bacterial Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: This outbreak provides a reminder of an important summertime vehicle of salmonellosis and indicates the potential for secondary spread of *Salmonella* infection to other household members.

From 1966-1976, 22 outbreaks of salmonellosis associated with homemade ice cream were reported to CDC. The outbreaks were associated with the use of ungraded farm- or home-produced eggs that were used uncooked in ice cream custard. *S. typhimurium* accounted for 45% of the outbreaks (*1*).

When *Salmonella* was introduced into a household by school-age children in this outbreak, the secondary attack rate of clinical diarrhea for household members was low, and when illness occurred it affected other siblings. In a follow up of cases of salmonellosis in New York City, the secondary attack rate was highest for children <1 year and adults >45 years (*2*). Other studies have shown that the secondary attack rate is much higher when the index patient is <1 year and when there are fewer household members

(Continued on page 473)

TABLE I. Summary – cases of specified notifiable diseases, United States

[Cumulative totals include revised and delayed reports through previous weeks.]

DISEASE	37th WEEK ENDING		MEDIAN 1976-1980	CUMULATIVE, FIRST 37 WEEKS		
	September 19 1981	September 13 1980		September 19 1981	September 13 1980	MEDIAN 1976-1980
Aseptic meningitis	416	286	286	5,708	4,537	3,820
Brucellosis	6	4	6	109	134	134
Chickenpox	290	319	254	166,930	157,937	157,937
Diphtheria	–	–	–	3	2	59
Encephalitis: Primary (arthropod-borne & unspec.)	72	57	57	888	714	714
Post-infectious	–	5	3	59	158	162
Hepatitis, Viral: Type B	370	353	316	14,408	12,346	13,671
Type A	423	561	561	17,627	19,674	20,954
Type unspecified	218	179	179	7,837	8,020	6,250
Malaria	19	38	18	1,001	1,455	495
Measles (rubeola)	17	39	90	2,668	12,864	23,944
Meningococcal infections: Total	44	28	29	2,614	1,990	1,823
Civilian	44	28	28	2,604	1,976	1,800
Military	–	–	–	10	14	17
Mumps	41	52	71	3,162	7,113	13,425
Pertussis	32	58	42	844	1,165	1,098
Rubella (German measles)	12	29	50	1,749	3,264	10,687
Tetanus	–	4	2	41	62	53
Tuberculosis	559	506	537	19,200	19,100	20,687
Tularemia	7	5	5	181	152	113
Typhoid fever	11	13	11	348	332	332
Typhus fever, tick-borne (Rky. Mt. spotted)	16	47	27	1,036	967	874
Venereal diseases:						
Gonorrhea: Civilian	20,616	20,701	20,955	705,458	697,809	700,978
Military	424	542	525	20,433	19,655	19,590
Syphilis, primary & secondary: Civilian	600	549	475	21,346	18,719	17,096
Military	8	3	5	263	227	226
Rabies in animals	127	109	76	5,255	4,770	2,261

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1981		CUM. 1981
Anthrax	–	Poliomyelitis: Total	3
Botulism (Ohio 1, Tex. 1, Calif. 1)	43	Paralytic	3
Cholera	3	Psittacosis (Mass. 1, Md. 1)	78
Congenital rubella syndrome	7	Rabies in man	1
Leprosy	177	Trichinosis (Mich. 1)	109
Leptospirosis (Tex. 1, Calif. 1)	30	Typhus fever, flea-borne (endemic, murine)	36
Plague	9		

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending September 19, 1981 and September 13, 1980 (37th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-infectious	B	A	Unspecified		
	1981	1981	1981	1981	CUM. 1981	1981	1980	1981	1981	1981	1981	1981	CUM. 1981
UNITED STATES	416	6	290	-	3	72	57	-	370	423	218	19	1,001
NEW ENGLAND	18	1	32	-	-	2	-	-	22	9	14	2	52
Maine	1	-	14	-	-	-	-	-	-	1	-	-	1
N.H.	-	-	-	-	-	-	-	-	-	-	-	-	3
Vt.	-	-	1	-	-	-	-	-	-	-	-	1	4
Mass.	8	1	5	-	-	2	-	-	7	2	13	1	31
R.I.	6	-	4	-	-	-	-	-	2	3	-	-	2
Conn.	3	-	8	-	-	-	-	-	13	3	1	-	11
MID. ATLANTIC	39	-	20	-	-	-	2	-	45	41	15	-	117
Upstate N.Y.	13	-	10	-	-	-	1	-	8	8	2	-	31
N.Y. City	7	-	10	-	-	-	-	-	19	14	3	-	38
N.J.	6	-	NN	-	-	-	-	-	18	19	10	-	35
Pa.	13	-	-	-	-	-	1	-	NA	NA	NA	-	13
E.N. CENTRAL	136	-	121	-	-	29	17	-	37	68	28	2	47
Ohio	29	-	9	-	-	14	5	-	19	29	12	-	7
Ind.	32	-	41	-	-	8	6	-	3	12	6	-	6
Ill.	-	-	12	-	-	-	5	-	6	10	4	1	15
Mich.	75	-	21	-	-	6	1	-	7	16	6	1	19
Wis.	-	-	38	-	-	1	-	-	2	1	-	-	-
W.N. CENTRAL	13	-	29	-	-	10	2	-	7	10	4	1	28
Minn.	-	-	1	-	-	9	-	-	1	4	-	-	10
Iowa	6	-	9	-	-	1	2	-	4	1	-	-	4
Mo.	6	-	1	-	-	-	-	-	1	3	1	-	3
N. Dak.	-	-	3	-	-	-	-	-	-	-	-	-	1
S. Dak.	-	-	-	-	-	-	-	-	-	1	-	-	1
Nebr.	-	-	6	-	-	-	-	-	1	-	1	1	2
Kans.	1	-	9	-	-	-	-	-	-	1	2	-	7
S. ATLANTIC	55	1	46	-	1	9	6	-	101	63	26	5	120
Del.	-	-	-	-	-	-	-	-	2	1	-	-	1
Md.	9	-	2	-	-	2	-	-	15	4	8	2	28
D.C.	-	-	-	-	-	-	-	-	2	-	-	-	9
Va.	9	-	5	-	-	2	3	-	6	3	5	-	23
W. Va.	-	-	5	-	-	-	1	-	6	1	1	-	3
N.C.	4	-	NN	-	-	4	1	-	4	9	2	1	8
S.C.	3	-	-	-	-	-	-	-	15	2	-	1	2
Ga.	10	-	1	-	-	-	-	-	23	11	-	-	8
Fla.	20	1	33	-	1	1	1	-	28	32	10	1	38
E.S. CENTRAL	48	1	8	-	-	9	2	-	27	40	4	-	10
Ky.	8	-	7	-	-	5	-	-	5	21	-	-	-
Tenn.	31	-	NN	-	-	3	-	-	10	10	1	-	-
Ala.	6	1	1	-	-	-	-	-	10	9	3	-	9
Miss.	3	-	-	-	-	1	2	-	2	-	-	-	1
W.S. CENTRAL	16	3	25	-	-	8	23	-	31	70	45	6	83
Ark.	-	-	-	-	-	-	-	-	1	9	4	1	6
La.	3	-	NN	-	-	-	8	-	10	18	5	-	5
Okla.	2	-	-	-	-	-	-	-	10	5	1	-	6
Tex.	11	3	25	-	-	8	15	-	10	38	35	5	66
MOUNTAIN	4	-	2	-	1	1	1	-	16	41	11	-	30
Mont.	-	-	-	-	1	1	-	-	-	1	-	-	1
Idaho	2	-	-	-	-	-	-	-	-	3	-	-	2
Wyo.	-	-	-	-	-	-	-	-	1	6	1	-	-
Colo.	2	-	2	-	-	-	1	-	2	15	2	-	14
N. Mex.	-	-	-	-	-	-	-	-	2	4	-	-	2
Ariz.	-	-	NN	-	-	-	-	-	3	9	3	-	4
Utah	-	-	-	-	-	-	-	-	1	1	3	-	4
Nev.	-	-	-	-	-	-	-	-	7	2	2	-	3
PACIFIC	87	-	7	-	1	4	4	-	84	81	71	3	514
Wash.	12	-	6	-	-	-	-	-	3	2	-	-	24
Oreg.	-	-	-	-	-	-	-	-	8	8	4	-	15
Calif.	72	-	1	-	-	4	3	-	70	66	64	2	466
Alaska	1	-	-	-	1	-	1	-	-	3	2	-	1
Hawaii	2	-	-	-	-	-	-	-	3	2	1	1	8
Guam	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	2
P.R.	-	-	20	-	-	-	-	-	9	10	2	1	11
V.I.	-	-	-	-	-	-	-	-	-	1	-	-	4
Pac. Trust Terr.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-

NN: Not notifiable. NA: Not available.
All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 19, 1981 and September 13, 1980 (37th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1981	CUM. 1981	CUM. 1980	1981	CUM. 1981	CUM. 1980	1981	CUM. 1981	1981	1981	CUM. 1981	CUM. 1981
UNITED STATES	17	2,668	12,864	44	2,614	1,990	41	3,162	32	12	1,749	41
NEW ENGLAND	1	78	674	–	180	111	3	156	4	–	106	2
Maine	–	5	33	–	20	5	–	29	2	–	33	–
N.H.	–	6	331	–	22	7	1	20	–	–	37	–
Vt.	1	2	226	–	6	13	–	6	–	–	–	–
Mass.	–	57	58	–	56	38	2	40	2	–	24	–
R.I.	–	–	2	–	16	7	–	21	–	–	–	–
Conn.	–	8	24	–	60	41	–	40	–	–	12	2
MID. ATLANTIC	3	808	3,772	5	369	346	3	552	1	1	209	2
Upstate N.Y.	1	212	690	–	121	112	3	108	–	1	101	1
N.Y. City	2	75	1,179	2	61	85	–	74	1	–	51	1
N.J.	–	57	830	3	83	75	–	83	–	–	46	–
Pa.	–	464	1,073	–	104	74	–	287	–	–	11	–
E.N. CENTRAL	–	79	2,413	8	312	251	10	873	5	1	354	7
Ohio	–	16	377	3	117	73	1	140	2	–	3	1
Ind.	–	8	91	–	43	37	–	100	2	–	127	2
Ill.	–	23	336	1	75	73	2	173	–	–	83	–
Mich.	–	30	235	4	72	55	–	299	–	–	34	3
Wis.	–	2	1,374	–	5	13	7	161	1	1	107	1
W.N. CENTRAL	–	6	1,333	3	114	78	1	172	1	–	75	3
Minn.	–	2	1,099	1	40	18	–	8	–	–	6	2
Iowa	–	1	20	–	19	9	–	46	–	–	4	–
Mo.	–	1	64	1	35	36	1	16	–	–	2	1
N. Dak.	–	–	–	–	2	1	–	–	–	–	–	–
S. Dak.	–	–	–	1	5	5	–	1	–	–	–	–
Nebr.	–	1	83	–	–	–	–	3	–	–	1	–
Kans.	–	1	67	–	13	9	–	98	1	–	62	–
S. ATLANTIC	1	365	1,884	11	590	482	7	452	11	3	141	8
Del.	–	–	3	–	4	2	–	10	–	–	1	–
Md.	–	5	71	2	42	45	–	83	–	–	1	–
D.C.	–	1	–	–	3	1	–	3	–	–	–	–
Va.	–	7	301	2	75	46	2	120	–	2	11	–
W. Va.	–	9	9	–	23	16	1	79	–	–	22	–
N.C.	–	3	129	–	83	91	–	15	–	–	5	2
S.C.	–	2	159	1	76	54	1	12	–	–	8	2
Ga.	–	112	811	2	99	82	2	35	7	1	36	1
Fla.	1	226	401	4	185	145	1	95	4	–	57	3
E.S. CENTRAL	–	4	330	2	186	174	–	77	2	–	37	2
Ky.	–	–	55	1	53	53	–	38	1	–	21	–
Tenn.	–	2	169	1	51	46	–	20	–	–	15	–
Ala.	–	2	22	–	58	48	–	16	–	–	1	2
Miss.	–	–	84	–	24	27	–	3	1	–	–	–
W.S. CENTRAL	4	936	942	7	424	207	5	191	–	1	155	9
Ark.	–	1	16	–	22	17	1	4	–	–	2	1
La.	2	4	11	1	103	75	–	5	–	–	9	2
Okla.	–	6	774	1	35	18	–	–	–	–	–	1
Tex.	2	925	141	5	264	97	4	182	–	1	144	5
MOUNTAIN	1	34	468	3	107	75	2	113	2	–	84	2
Mont.	–	–	2	–	7	3	–	10	–	–	4	–
Idaho	–	1	–	1	4	4	–	4	2	–	3	–
Wyo.	–	–	–	–	1	2	–	1	–	–	10	–
Colo.	1	10	24	2	37	20	–	42	–	–	27	–
N. Mex.	–	8	11	–	7	8	–	–	–	–	5	–
Ariz.	–	5	376	–	19	12	2	27	–	–	20	1
Utah	–	–	47	–	5	5	–	16	–	–	5	1
Nev.	–	10	8	–	27	21	–	13	–	–	10	–
PACIFIC	7	358	1,048	5	332	266	10	576	6	6	588	6
Wash.	–	3	177	–	60	47	1	139	–	–	89	–
Oreg.	–	4	–	1	51	46	–	62	–	1	51	–
Calif.	4	344	859	3	209	165	6	344	6	5	436	6
Alaska	–	–	6	1	8	8	3	10	–	–	1	–
Hawaii	3	7	6	–	4	–	–	21	–	–	11	–
Guam	NA	5	6	–	–	1	NA	6	NA	NA	1	–
P.R.	1	270	136	–	10	9	1	117	–	–	3	5
V.I.	–	25	6	–	1	1	–	5	–	–	1	–
Pac. Trust Terr.	NA	1	8	–	–	–	NA	9	NA	NA	1	–

NA: Not available.
All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 19, 1981 and September 13, 1980 (37th week)

REPORTING AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1981	CUM. 1981	CUM. 1981	1981	CUM. 1981	1981	CUM. 1981	1981	CUM. 1981	CUM. 1980	1981	CUM. 1981	CUM. 1980	CUM. 1981
UNITED STATES	559	19,200	181	11	348	16	1,036	20,616	705,458	697,809	600	21,346	18,719	5,255
NEW ENGLAND	12	549	1	-	14	-	9	541	17,698	17,474	9	423	373	33
Maine	-	36	-	-	1	-	-	32	908	1,001	-	4	5	13
N.H.	-	14	-	-	-	-	-	22	638	635	-	11	3	6
Vt.	-	18	-	-	-	-	-	7	288	406	-	13	5	-
Mass.	7	314	-	-	8	-	5	246	7,387	7,346	9	275	218	9
R.I.	4	41	-	-	-	-	2	47	1,023	1,134	-	24	24	-
Conn.	1	126	1	-	5	-	2	187	7,454	6,952	-	96	118	5
MID. ATLANTIC	68	2,998	10	-	56	1	38	2,961	83,861	75,629	102	3,117	2,609	80
Upstate N.Y.	11	540	10	-	11	1	14	389	14,355	13,806	15	296	217	57
N.Y. City	23	1,153	-	-	30	-	3	1,095	33,792	29,003	58	1,835	1,700	-
N.J.	24	633	-	-	10	-	9	616	16,311	14,049	12	438	314	17
Pa.	10	672	-	-	5	-	12	861	19,403	18,771	17	548	378	6
E.N. CENTRAL	97	2,555	1	3	27	1	46	2,214	102,554	107,982	40	1,449	1,744	710
Ohio	18	483	-	2	7	1	37	529	33,250	28,325	22	222	261	54
Ind.	14	292	-	-	-	-	2	255	9,262	11,061	14	198	141	81
Ill.	43	992	-	-	11	-	6	374	26,961	33,957	-	697	987	465
Mich.	17	648	1	1	7	-	1	751	23,361	24,428	3	262	291	13
Wis.	5	140	-	-	2	-	-	305	9,720	10,211	1	70	64	97
W.N. CENTRAL	7	664	26	3	16	2	43	1,334	34,057	32,723	15	443	241	2,161
Minn.	4	119	-	-	2	-	1	323	5,234	5,399	2	150	85	378
Iowa	-	71	-	-	3	1	6	121	3,715	3,589	-	16	14	697
Mo.	1	292	21	3	6	1	24	608	15,969	14,364	11	240	117	189
N. Dak.	-	23	-	-	-	-	-	5	424	468	-	8	3	320
S. Dak.	-	48	1	-	1	-	-	28	944	993	-	2	2	260
Nebr.	1	20	3	-	2	-	3	62	2,550	2,546	1	6	6	159
Kans.	1	91	1	-	2	-	9	187	5,221	5,364	1	21	14	158
S. ATLANTIC	129	4,183	15	2	50	10	597	4,864	175,237	174,910	151	5,689	4,455	393
Del.	-	54	1	-	-	-	2	78	2,775	2,467	-	11	10	1
Md.	21	432	-	-	14	1	54	724	20,222	18,837	21	428	323	28
D.C.	7	257	-	-	1	-	-	216	10,036	12,402	13	459	331	-
Va.	10	428	3	-	1	-	98	463	16,057	15,876	21	495	400	76
W. Va.	-	127	-	-	5	-	5	82	2,657	2,350	1	17	15	18
N.C.	25	743	4	-	1	5	261	629	26,885	25,059	11	429	305	10
S.C.	14	384	3	1	1	2	99	531	17,058	16,554	21	379	251	29
Ga.	15	691	4	-	4	2	69	985	36,464	33,965	31	1,446	1,295	167
Fla.	37	1,067	-	1	23	-	9	1,156	43,083	47,400	32	2,025	1,525	64
E.S. CENTRAL	49	1,675	7	-	7	-	115	1,421	58,890	57,169	37	1,417	1,538	343
Ky.	14	425	2	-	-	-	2	308	7,350	8,365	1	69	103	103
Tenn.	13	559	5	-	3	-	74	617	22,449	20,730	7	522	650	169
Ala.	10	441	-	-	2	-	16	186	17,866	16,899	20	420	320	71
Miss.	12	250	-	-	2	-	23	310	11,225	11,175	9	406	465	-
W.S. CENTRAL	73	2,172	81	1	49	2	157	3,309	94,184	88,946	138	5,230	3,717	879
Ark.	9	234	43	-	4	1	32	288	7,026	7,046	1	112	129	118
La.	1	388	2	-	2	-	-	735	16,350	16,182	15	1,210	901	30
Okla.	17	261	24	-	4	-	93	360	10,182	8,967	1	115	69	177
Tex.	46	1,289	12	1	39	1	32	1,926	60,626	56,751	121	3,793	2,618	554
MOUNTAIN	23	547	34	-	22	-	26	869	27,675	27,043	7	547	439	199
Mont.	-	27	5	-	4	-	12	35	1,003	1,034	-	11	2	93
Idaho	-	7	4	-	-	-	5	47	1,259	1,201	-	17	15	4
Wyo.	-	9	1	-	-	-	5	42	680	799	-	7	8	14
Colo.	10	66	8	-	8	-	-	174	7,442	7,306	5	169	116	29
N. Mex.	2	105	3	-	-	-	-	65	2,902	3,337	2	96	74	28
Ariz.	9	250	-	-	9	-	-	319	8,360	7,193	-	135	154	22
Utah	2	42	12	-	1	-	1	52	1,347	1,357	-	21	11	6
Nev.	-	41	1	-	-	-	3	135	4,682	4,816	-	91	59	3
PACIFIC	101	3,857	6	2	107	-	5	3,103	111,302	115,933	101	3,031	3,603	457
Wash.	5	279	1	-	3	-	1	236	9,053	9,907	-	112	181	12
Oreg.	1	136	-	-	4	-	-	196	6,605	7,828	2	70	72	8
Calif.	89	3,291	5	2	99	-	4	2,520	90,633	93,036	96	2,789	3,227	423
Alaska	-	44	-	-	-	-	-	92	2,795	2,817	-	10	7	14
Hawaii	6	107	-	-	1	-	-	59	2,216	2,345	3	50	116	-
Guam	NA	23	-	NA	-	NA	-	NA	64	94	NA	-	5	-
P.R.	-	282	-	-	4	-	-	91	2,375	1,940	15	483	423	60
V.I.	-	1	-	-	6	-	-	10	154	108	-	15	10	-
Pac. Trust Terr.	NA	38	-	NA	-	NA	-	NA	257	293	NA	-	-	-

NA: Not available.
All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE IV. Deaths in 121 U.S. cities,* week ending September 19, 1981 (37th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	655	437	142	27	24	25	50
Boston, Mass.	177	92	59	9	9	8	18
Bridgeport, Conn.	68	44	18	1	4	1	7
Cambridge, Mass.	27	21	5	1	–	–	6
Fall River, Mass.	26	20	4	–	–	2	–
Hartford, Conn.	47	31	9	3	2	2	2
Lowell, Mass.	27	19	5	2	1	–	1
Lynn, Mass.	18	11	7	–	–	–	1
New Bedford, Mass.	21	17	2	1	–	1	1
New Haven, Conn.	57	33	14	3	4	3	1
Providence, R.I. §	60	56	–	2	–	2	4
Somerville, Mass.	6	5	–	1	–	–	–
Springfield, Mass.	34	20	8	1	2	3	2
Waterbury, Conn.	30	25	3	1	–	1	2
Worcester, Mass.	57	43	8	2	2	2	5
MID. ATLANTIC	2,426	1,559	558	185	56	67	95
Albany, N.Y.	43	29	9	3	–	1	–
Allentown, Pa.	21	15	5	1	–	–	–
Buffalo, N.Y.	100	67	18	5	4	6	16
Camden, N.J.	43	22	14	4	1	2	–
Elizabeth, N.J.	32	24	5	1	2	–	2
Erie, Pa.†	44	25	10	5	1	3	3
Jersey City, N.J.	50	38	10	2	–	–	–
N.Y. City, N.Y.	1,317	830	304	115	32	36	44
Newark, N.J.	85	43	28	8	3	3	7
Paterson, N.J.	23	16	3	2	1	1	–
Philadelphia, Pa.†	243	152	59	17	8	7	5
Pittsburgh, Pa.†	64	41	19	2	–	2	1
Reading, Pa.	30	25	3	1	1	–	–
Rochester, N.Y.	123	93	20	6	1	3	11
Schenectady, N.Y.	20	14	3	2	–	1	1
Scranton, Pa.†	19	11	8	–	–	–	1
Syracuse, N.Y.	84	58	17	5	2	2	2
Trenton, N.J.	33	18	12	3	–	–	–
Utica, N.Y.	17	12	5	–	–	–	–
Yonkers, N.Y.	35	26	6	3	–	–	2
E.N. CENTRAL	2,380	1,415	640	148	87	90	62
Akron, Ohio	71	41	23	3	–	4	–
Canton, Ohio	37	24	8	3	1	1	–
Chicago, Ill.	538	291	152	47	24	24	13
Cincinnati, Ohio	147	87	46	7	4	3	7
Cleveland, Ohio	213	112	64	14	10	13	5
Columbus, Ohio	133	72	41	14	3	3	4
Dayton, Ohio	117	80	24	6	3	4	3
Detroit, Mich.	271	158	78	20	9	6	5
Evansville, Ind.	43	30	8	1	3	1	1
Fort Wayne, Ind.	64	51	8	–	3	2	6
Gary, Ind.	26	16	8	1	1	–	1
Grand Rapids, Mich.	76	56	14	1	1	4	2
Indianapolis, Ind.	197	114	57	7	11	8	3
Madison, Wis.	29	11	9	4	1	4	3
Milwaukee, Wis.	131	80	36	7	4	4	1
Peoria, Ill.	44	29	11	1	1	2	3
Rockford, Ill.	47	32	9	2	2	2	4
South Bend, Ind.	57	47	6	1	3	–	–
Toledo, Ohio	80	39	26	9	3	3	1
Youngstown, Ohio	59	45	12	–	–	2	–
W.N. CENTRAL	725	460	143	51	37	34	16
Des Moines, Iowa	50	31	11	3	3	2	–
Duluth, Minn.	26	16	3	2	2	3	3
Kansas City, Kans.	24	14	2	7	1	–	–
Kansas City, Mo.	106	62	24	9	5	6	3
Lincoln, Nebr.	38	25	4	4	4	1	1
Minneapolis, Minn.	78	46	12	8	4	8	–
Omaha, Nebr.	82	58	17	1	2	4	5
St. Louis, Mo.	174	110	41	8	10	5	–
St. Paul, Minn.	82	62	11	6	1	2	1
Wichita, Kans.	65	36	18	3	5	3	3

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,387	801	351	116	50	69	47
Atlanta, Ga.	141	85	39	9	3	5	4
Baltimore, Md.	272	142	87	25	8	10	1
Charlotte, N.C.	98	60	24	3	5	6	12
Jacksonville, Fla.	122	80	22	12	2	6	5
Miami, Fla.	151	89	39	9	7	7	3
Norfolk, Va.	69	36	17	1	6	9	3
Richmond, Va.	62	33	16	6	4	3	6
Savannah, Ga.	37	19	10	4	2	2	1
St. Petersburg, Fla.	102	74	21	2	3	2	4
Tampa, Fla.	70	42	15	7	3	3	3
Washington, D.C.	215	109	48	35	7	16	5
Wilmington, Del.	48	32	13	3	–	–	–
E.S. CENTRAL	680	426	163	46	27	18	27
Birmingham, Ala.	93	57	19	6	6	5	–
Chattanooga, Tenn.	62	35	13	8	4	2	3
Knoxville, Tenn.	41	26	11	1	1	2	–
Louisville, Ky.	117	75	33	6	3	–	11
Memphis, Tenn.	162	100	40	13	5	4	6
Mobile, Ala.	55	40	10	2	1	2	4
Montgomery, Ala.	48	28	11	4	3	2	1
Nashville, Tenn.	102	65	26	6	4	1	2
W.S. CENTRAL	1,426	789	353	129	95	60	40
Austin, Tex.	61	38	11	6	5	1	4
Baton Rouge, La.	56	39	12	2	2	1	3
Corpus Christi, Tex.	67	37	14	5	7	4	–
Dallas, Tex.	213	117	50	22	12	12	3
El Paso, Tex.	47	22	11	3	9	2	2
Fort Worth, Tex.	93	57	19	4	4	9	8
Houston, Tex.	358	173	102	43	32	8	6
Little Rock, Ark.	54	37	10	2	3	2	4
New Orleans, La.	138	72	43	12	6	5	–
San Antonio, Tex.	167	98	40	15	7	7	7
Shreveport, La.	67	41	14	8	1	3	–
Tulsa, Okla.	105	58	27	7	7	6	3
MOUNTAIN	619	353	126	62	49	29	25
Albuquerque, N.Mex.	92	31	9	21	27	4	3
Colo. Springs, Colo.	41	27	6	5	1	2	2
Denver, Colo.	108	58	30	10	8	2	6
Las Vegas, Nev.	61	35	17	7	2	–	1
Ogden, Utah	29	19	8	2	–	–	2
Phoenix, Ariz.	129	83	22	8	5	11	4
Pueblo, Colo.	18	13	2	2	1	–	1
Salt Lake City, Utah	36	21	7	–	1	7	2
Tucson, Ariz.	105	66	25	7	4	3	4
PACIFIC	1,668	1,077	350	124	56	61	52
Berkeley, Calif.	15	12	3	–	–	–	–
Fresno, Calif.	73	49	15	5	3	1	2
Glendale, Calif.	19	12	5	2	–	–	2
Honolulu, Hawaii	53	35	9	4	3	2	–
Long Beach, Calif.	99	64	25	1	4	5	3
Los Angeles, Calif.	487	300	102	50	23	12	15
Oakland, Calif.	70	47	14	3	2	4	5
Pasadena, Calif.	20	17	2	1	–	–	1
Portland, Oreg.	92	61	18	5	3	5	–
Sacramento, Calif.	50	30	12	4	2	2	3
San Diego, Calif.	125	82	26	14	1	2	2
San Francisco, Calif.	168	107	39	13	2	7	4
San Jose, Calif.	171	106	43	8	4	10	10
Seattle, Wash.	120	73	27	8	7	5	1
Spokane, Wash.	59	50	1	5	1	2	2
Tacoma, Wash.	47	32	9	1	1	4	2
TOTAL	11,966††	7,317	2,826	888	481	453	414

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available this week. Figures are estimates based on average percent of regional totals.

Salmonellosis – Continued

(such as parents only), suggesting that secondary cases are associated with close contact with an infant (*3*).

References

1. Gunn RA, Markakis G. Salmonellosis associated with homemade ice cream. An outbreak report and summary of outbreaks in the United States in 1966 to 1976. JAMA 1978;240:1885-6.
2. Fuerst HT. The epidemiology of *Salmonella* infections in the city of New York. Bull NY Acad Med 1964;40:948-60.
3. Leeder FS. An epidemic of *Salmonella panama* infections in infants. Ann NY Acad Sci 1956; 66:54-60.

International Notes

Human-to-Human Transmission of Rabies via Corneal Transplant – Thailand

On May 15, 1981, in Thailand, a 41-year-old woman died of rabies, 22 days after receiving a corneal transplant of the right eye. On May 24, 1981, a 25-year-old man also died of rabies, 33 days after receiving a corneal transplant of the right eye. Both recipients had received the corneal grafts from the same donor, a 16-year-old boy who had died following an unidentified illness.

A brief discussion of the clinical course of these 2 patients and of the donor appears below.

Patient 1: A 41-year-old housewife from Nakhon Pathom province (60 km from Bangkok) was admitted to the Siriraj Hospital with the diagnosis of an *Aspergillus* corneal ulcer on March 18. Keratoplasty was performed on April 23.

The operation was uneventful, and she was discharged from the hospital on May 12, 19 days after the corneal transplant. She did well at home for the first 2 days, but became ill on the third day (May 15). She complained of tinnitus and malaise and had difficulty in swallowing food. She went to the local health center and was given 1,000 ml of 5% dextrose in normal saline intravenously. Later the same day, she complained of chest discomfort and showed signs of aerophagia, slight dyspnea, and insomnia. She was transferred to the Provincial Hospital of Nakhon Pathom. By this time, she had definite signs of aerophobia and hydrophobia. The clinical diagnosis of rabies was made, and she was referred to Bamrasnaradul Infectious Hospital. She died within minutes of admission to the hospital. Brain material obtained at autopsy was found positive for rabies by fluorescent microscopic examination and mouse inoculation. No definite history of animal bites could be determined.

Patient 2: A 25-year-old man from Khon Kaen Province (500 km from Bangkok) was admitted to the Siriraj Hospital on March 27. Penetrating keratoplasty (17 mm) to correct an adherent leukoma of the right eye was done under general anesthesia on April 21 without complications. The corneal graft was clear, and no pannus formation was seen. Stitches were removed on May 15 and May 22. Later on May 22, the patient complained of pain in the right eye and headache radiating to the neck; the graft was then resutured under local anesthesia. In the evening the patient experienced more pain in the

Rabies — Continued

eye, chest discomfort, and hyperesthesia of both hands and feet. Body temperature was 37.4 C (99.3 F), and the pulse rate was 78/minute. During the night his restlessness was associated with delirium and mental confusion. On May 23, he was thirsty but would not drink, and began to show signs of hydrophobia, hypersalivation, aerophagia, and aerophobia. He complained of heart palpitations and an itching sensation on the right side of his head. A clinical diagnosis of rabies was made, and he was referred to Bamrasnaradul Infectious Hospital for further treatment. He died on May 24, 33 days after the corneal transplant. An autopsy was not permitted. He had neither a history of animal bite nor contact with a known rabid animal.

The ophthalmologists and forensic pathologists who had been exposed to the patient(s) were vaccinated against rabies with human diploid cell rabies vaccine (Institute Merieux).

Donor: The donor was a resident of Samut Sakhon province (80 km from Bangkok). Three days before death, he refused to take food or water for unspecified reasons. He had cold, clammy skin and experienced occasional mental confusion. He complained of headache and pain in the right leg. He remained at home until late the night of April 20, 1981, when relatives took him to Siriraj Hospital in Bangkok for treatment. In the outpatient department, he became cyanotic and died that night. Early the next morning both eyes were removed for use as corneal grafts. Relatives of the donor gave no definite history of animal bite for the patient.

On autopsy, the forensic pathologist reported that the brain was slightly congested. Subepicardial hemorrhages were seen. Only mucous material without food residue was found in the stomach. No specific pathologic change was found in heart, brain, or lungs.

After both recipients of corneal transplants had died of rabies, the donor's brain tissue was reexamined; sections stained with hematoxylin-eosin stain were found to have Negri bodies in the cytoplasm of a few nerve cells, confirming the diagnosis of rabies for the donor.

Reported by P Thongcharoen, C Wasi, S Sirikavin, P Boonthai, A Bedavanij, P Dumavibhat, N Chantarakul, V Eungprabbanth, P Puthavathana, L Chavanich, S Tantawachakit, Siriraj Hospital, Mahidol University, Bamrasnaradul Infectious Hospital, Ministry of Public Health, Bangkok, Thailand; Respiratory and Special Pathogens Br, Center for Infectious Diseases, CDC.

Editorial Note: These are the third and fourth reported cases of human-to-human rabies transmission by corneal transplant (*1,2*). The temporal association of the 2 recipients' illnesses and the lack of other identified exposure implicate the transplanted corneas as the source of rabies. As in the earlier transplant-associated cases, the diagnosis of rabies was not suspected before the donor's death. These 2 additional cases further demonstrate the difficulty in diagnosing rabies in humans when no animal bite has been reported. Antemortem diagnosis of rabies is difficult and often unreliable. The diagnosis can be made postmortem by demonstrating Negri bodies, isolating virus, or using immunofluorescence techniques to demonstrate rabies antigen. These cases underscore the importance of not using transplant tissue from persons who have died of neurologic illness of unknown cause.

References

1. CDC. Human-to-human transmission of rabies via a corneal transplant—Idaho. MMWR 1979; 28:109-11.
2. CDC. Human-to-human transmission of rabies via a corneal transplant—France. MMWR 1980; 29:25-6.

Erratum, Vol. 30, No. 35

p441. In the article, "Syphilis Trends in the United States," the data in the last paragraph on the first page were case rates for the various states, not case numbers as was erroneously stated. The paragraph should read:

During the 2-year period 1979-1980, the number of congenital syphilis cases per 1,000 primary and secondary syphilis cases in women ranged from 5.9 to 74.1 in those states reporting 2 or more congenital syphilis cases. States with the highest rates were Missouri (74.1), Oregon (66.7), Massachusetts (65.6), the District of Columbia (60.5), and Indiana (59.8); states with the lowest rates were North Carolina (5.9), Mississippi (6.6), and Florida (7.0).

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