

Toxic-Shock Syndrome — Continued

anterior nares, urine, and stool—have been obtained. These drugs have not been documented to ameliorate the disease or to improve outcome, but they do appear to prevent recurrences. Immediate supportive therapy is necessary for severe cases.

In order to develop additional data concerning TSS, a prospective case-control study will be undertaken in consultation with the Food and Drug Administration. Physicians are encouraged to continue reporting cases to their state health departments and to the Special Pathogens Branch, Bureau of Epidemiology, CDC, Atlanta, Georgia 30333 (404-329-3687).

References

1. MMWR 1980;29:229-30.
2. Bartlett JG, Onderdonk AB, Drude E, et al. Quantitative bacteriology of the vaginal flora. *J Infect Dis* 1977;136:271-7.
3. Todd J, Fishaut M, Kapral F, Welch T. Toxic-shock syndrome associated with phage-group-1 staphylococci. *Lancet* 1978;2:1116-8.

Follow-up on Mount St. Helens

As previously reported (1-3), the National Institute for Occupational Safety and Health (NIOSH) has been analyzing dust samples from areas that received volcanic ashfall to determine the level of free crystalline silica that they contain. Crystalline silica—the cause of the disease silicosis—can occur in several forms: quartz, cristobalite, and tridymite. Several techniques to identify and quantitate crystalline silica have confirmed the presence of quartz and cristobalite, at levels of about 2% and 4% of the respirable (<10 μ m) fraction, in settled-dust samples collected at Ellensburg, Yakima, and Spokane, Washington.

Questionnaires designed to study symptoms in the general population that could possibly be related to the ashfall were distributed the week beginning June 2 in Moses Lake, Washington, by a team of epidemiologists from the local and the state health departments and from CDC. A preliminary analysis of the questionnaires is now available. One hundred ninety-three households were randomly chosen; questionnaires were to be completed for every household member. Completed questionnaires have thus far been received for 150 (78%) of households, or 406 residents (approximately 4% of the town's total population). Among the 186 males and 216 females,* 109 (27%) were under 14 years of age and 50 (12%) were aged 65 or over. About 40% of respondents, including children, had regularly worn masks.

The preliminary review indicates that an increase in complaints of cough and mild irritation of the eyes, nose, and throat occurred in the 2 weeks following the May 18 eruption. Hemoptysis was reported in 2 people, both of whom had received heavy exposures. There was little evidence of an increase in symptoms of skin irritation, diarrhea, headache, or in fever. Twenty people (5%) had visited a physician, emergency room (ER) or clinic since the eruption, 3 for respiratory complaints and 17 for other problems seemingly unrelated to ashfall. Four people (1%) had been admitted to a hospital, 1 for respiratory disease.

*The sex of 4 subjects was unknown.

Mount St. Helens — Continued

Surveillance of hospital emergency room visits and admissions in 21 Washington hospitals continued through the weeks May 11-June 14 (3). In Ritzville, Moses Lake, and Othello—the 3 eastern Washington sites with the highest levels of ashfall—the numbers of weekly pulmonary† ER visits and hospital admissions for the third and fourth post-eruption weeks (June 1-7 and June 8-14) appeared to be comparable to those reported before the May 18 eruption. However, in Yakima and Spokane, an apparent sustained increase in pulmonary visits—but not admissions—was seen for the week of June 8-14.

With the exception of Centralia, the western Washington hospitals surveyed reported small or no increases in pulmonary ER visits for the week of May 25-31 (after the ashfall of May 25). Centralia—the town with the greatest ashfall (1 inch)—had a marked increase: from 17 to 44. The number of ER visits for pulmonary conditions appeared to have returned to pre-eruption levels by the second week (June 1-7). Only 1 hospital (in Aberdeen) had an increase in reported pulmonary admissions for the 2 weeks (May 24-June 7) after the ashfall (from 5 to 12 and 10).

Reported by the Div of Respiratory Disease Studies, NIOSH, and the Chronic Diseases Div, Bur of Epidemiology, CDC.

References

1. MMWR 1980;29:263-4.
2. MMWR 1980;29:283-4.
3. MMWR 1980;29:286.

†These included pneumonia, asthma, bronchitis, chronic obstructive pulmonary disease, and emphysema; upper respiratory infections were excluded.

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

(Cumulative totals include revised and delayed reports through previous weeks.)

DISEASE	25th WEEK ENDING		MEDIAN 1975-1979	CUMULATIVE, FIRST 25 WEEKS		
	June 21, 1980	June 23, 1979		June 21, 1980	June 23, 1979	MEDIAN 1975-1979
Aseptic meningitis	98	125	100	1,564	1,414	1,060
Brucellosis	6	9	6	81	56	93
Chickenpox	4,535	4,483	3,307	144,355	162,183	142,079
Diphtheria	-	-	-	2	4	112
Encephalitis: Primary (arthropod-borne & unspec.)	7	13	18	280	251	308
Post-infectious	4	4	5	93	120	120
Hepatitis, Viral: Type B	354	319	308	7,965	6,718	7,095
Type A	569	637	625	12,679	14,023	15,213
Type unspecified	226	221	159	5,644	4,797	4,128
Malaria	56	19	17	819	265	210
Measles (rubeola)	458	317	924	11,180	10,290	20,679
Meningococcal infections: Total	51	56	28	1,520	1,564	1,317
Civilian	51	55	28	1,514	1,548	1,311
Military	-	1	1	6	16	16
Mumps	156	301	476	6,378	9,759	14,257
Pertussis	25	47	34	517	596	596
Rubella (German measles)	84	362	362	2,794	9,574	13,726
Tetanus	4	1	1	28	27	29
Tuberculosis	630	655	689	12,950	13,164	14,500
Tularemia	8	4	4	60	82	57
Typhoid fever	10	11	8	168	210	164
Typhus fever, tick-borne (Rky. Mt. spotted)	37	48	48	298	287	287
Veneral diseases:						
Gonorrhea: Civilian	20,208	22,182	19,498	452,640	456,573	451,180
Military	314	499	495	12,608	13,050	13,050
Syphilis, primary & secondary: Civilian	485	567	449	12,440	11,575	11,575
Military	5	1	6	149	139	146
Rabies in animals	127	93	72	3,175	2,289	1,411

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1980		CUM. 1980
Anthrax	-	Poliomyelitis: Total	7
Botulism (Colo. 1, Alaska 1)	22	Paralytic (Wyo. 1, Calif. 1)	5
Cholera	8	Psittacosis	36
Congenital rubella syndrome	38	Rabies in man	-
Leprosy (La. 1, Calif. 1)	82	Trichinosis (Calif. 1)	64
Leptospirosis (Miss. 1, Hawaii 2)	27	Typhus fever, flea-borne (endemic, murine) (Tex. 4, Calif. 1)	28
Plague	3		

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

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Epidemiologic Notes and Reports

Follow-up on Toxic-Shock Syndrome — United States

In a recent MMWR (1), 55 cases of toxic-shock syndrome (TSS) were reported. TSS is a recently recognized syndrome characterized by sudden onset of high fever, vomiting, and diarrhea with rapid progression to hypotension and shock. These symptoms are accompanied by a sunburn-like rash which later desquamates, particularly on the palms and soles. The disease primarily affects young women during their menstrual periods, although a small number of cases have been recognized in women who are not menstruating at the time of onset, and in men. Since the earlier report, more than 50 additional cases of TSS that have occurred since September 1978 have been reported to CDC; 96% of these cases have occurred in women aged 12-52 during their menstrual periods.

Because of the striking association with menses, the Wisconsin State Department of Health and Social Services, the Utah State Department of Health, and CDC undertook separate studies to look at various practices and products associated with the menstrual cycle. The CDC study consisted of administering a telephone questionnaire to 52 women who had illness meeting a clinical case definition of TSS and 52 age- and sex-matched controls. With 1 exception, none of these were among the 55 originally reported cases. Controls were chosen by TSS patients from among their acquaintances. No significant differences were found between the patients and controls in marital status, parity, contraceptive methods used, frequency of sexual intercourse, frequency of sexual intercourse during menstruation, brand of tampon or sanitary napkin used, absorbency, or use of deodorized tampons. However, 50 of 50 cases with onset during menstruation (100%) used tampons as compared to 43 of 50 controls (86%) ($p = .02$ by McNemar test with continuity correction). Among case-control pairs who used tampons, more cases than controls used tampons at all times (day and night) while menstruating ($p < .05$; McNemar). Of the 52 cases included in the case-control study, vaginal cultures had been taken from 17 before antibiotic therapy was begun; of these, 16 (94%) were positive for *Staphylococcus aureus*. It is not known what proportion of women without TSS have vaginal cultures positive for *S. aureus* at the time of a menstrual period; estimates of the prevalence of *S. aureus* in the vagina and cervix range from 2%-15%, but it has been shown that aerobes are found in higher concentrations during the menstrual period than in the week preceding its onset (2). All of 5 isolates submitted to CDC have been penicillin-resistant, and a variety of phage-typing patterns have been found.

A similar study has been conducted by epidemiologists at the Wisconsin Division of Health, using 31 TSS patients from Wisconsin and 93 controls, matched only for menstruation, from gynecologic clinics. In this study, 30 of 31 patients (97%) and 71 of 93 controls (76%) used tampons during every menstrual period ($p = .014$; Fisher's exact 2-tail test). Controls were not matched with respect to marital status (32% of patients were