EPIDEMIOLOGY BULLETIN

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An Occupational Ailment Causing Substantial Morbidity

Carpal Tunnel Syndrome

In recent months, carpal tunnel syndrome (CTS) has been the occupational illness most frequently reported to the Department of Health. For the three month period August 1 through October 31, 1984, 43 cases were reported, representing 27% of the total of 158 reported cases of occupational disease. To date in 1984, 111 cases of CTS have been reported in Virginia.

Reports were received from two sources. First, disease-specific information regarding workmen's compensation claims were shared by the Industrial Commission of Virginia with the Department of Health. Those claims carrying a physician's diagnosis of CTS were included in this analysis. Second, confidential morbidity reports were received directly from physicians (these were reported on the back side of the cards used for communicable disease reporting, in compliance with legal requirements established in 1979 making occupational diseases reportable).

Of the 43 cases reported during the past three months, location of employment was known for all except one. The majority of cases (27 or 64%) were reported from the northwest and southwest regions of the Commonwealth.

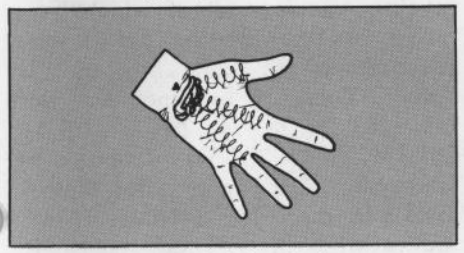

Figure 1. Tinel sign.
Tapping the wrist at palmar crease cause painful sensations along distribution of median nerve.

The type of industry where employed was known for 38 of the 43 cases. Although 21 different industry classes were represented, those most frequently listed were apparel-6 (16%), poultry-6 (16%), and textile-4 (11%). Occupation or job description was known for 31 cases; all were indicative of activities requiring repetitive motion of the hands and wrists e.g. "assembler", "chipper", "trimmer", "fishnet mender", "studpuller", and "weaver." Case gender was known for 41; 33 (77%) were female.

Editor's comment: Carpal tunnel syndrome is a compression neuropathy of the median nerve at the carpal tunnel, the boundaries of which include the carpal bones and the carpal ligament. Symptoms include clumsiness, numbness, tingling and pain in the distribution of the median nerve. Examination may reveal sensory loss and thenar wasting or weakness. Two provocative tests of diagnostic use are Tinel's sign (*Figure 1*), and Phalen's test (*Figure 2*).

Occupational carpal tunnel syndrome is one of the most common disorders due to repetitive motion trauma. In 1980 there were approximately 23,200 occupational injuries associated with repetitive trauma in the U.S. according to the Bureau of Labor Statistics.[1]

Although CTS has traditionally been thought to be primarily idiopathic or associated with various medical conditions such as diabetes mellitus, gout, or hypothyroidism, several case series have demonstrated high proportions of cases associated with repetitive trauma.[2,3] Occupational CTS is caused by repeated forceful exertions of the hand, especially with the wrist deviated or the hand in a pinch position.[4] Although most series report a higher proportion of female than male cases, it is not clear that gender is a risk factor; the preponderance of female cases may merely reflect a similar gender distribution in the work force at risk.

The Department of Health's Bureau of Occupational Health has been conducting workshops around the Commonwealth for health and safety personnel from industry. The aim is to improve the understanding and recognition of repetitive motion disorders, and to offer suggestions for making ergonomic changes in the workplace that will help prevent these disorders. A handbook describing many of the medical and ergonomic aspects of these disorders has been developed and is available on a limited basis, free of charge, by calling (804) 281-9527.

References on page 3.

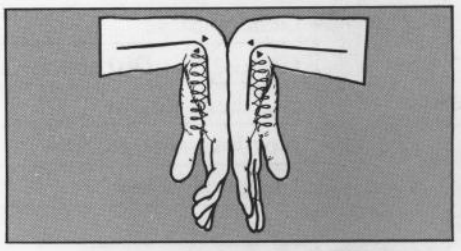

Figure 2. Phalen's Test.
Have patient hold hands in forced flexion for one minute to reproduce sensations in hand. More predictive than Tinel's.

Potential Exposure of Boy Scouts to Dioxin.

Epidemiologists and toxicologists at the Virginia Department of Health have reviewed available information concerning the dioxin contamination at Fort A.P. Hill. They are in agreement with the statement released by the Centers for Disease Control on November 14, 1984:

"The Centers for Disease Control (CDC) has been contacted by the Department of the Army Surgeon General's Office and the Boy Scouts of America regarding dioxin contamination at Fort A.P. Hill, Virginia. Preliminary findings at the Fort indicate that dioxin was detected in soil near a herbicide storage shed in a fenced enclosure in the vicinity of where a national jamboree was held in 1981.

"Based upon the information we have, the chance for harmful dioxin exposure of scouts during the jamboree is exceedingly remote. Therefore, medical examinations or laboratory testing of scouts at the jamboree are not necessary or recommended.

"The risk assessment that CDC previously performed on dioxin was based upon a 70-year lifetime exposure. The maximum possible exposure for boy scouts at the jamboree would have been less than two weeks.

"It is our estimate that no harm was done. If any information is obtained to alter this opinion, CDC will revise its recommendations."

Comment: A fact sheet on dioxin is available, free of charge, by calling (804) 786-1763 or by writing to:

Toxic Substances Information
Virginia Department of Health
109 Governor Street
Richmond, VA 23219

AIDS in Virginia—Statistics

Reported Category	Number	Percentage
Year Reported	—	—
1982	6	—
1983	25	—
1984*	34	—
Total	63	100
Pediatric Age Group (<20)	0	0
Race = White	49	78
Risk Groups	—	—
Homosexual/Bisexual	52	83
I.V. Drug Abuse	5	8
Transfusion	2	3
None/Unknown	4	6
Gender-Male	61	97
Geographic Distribution	—	—
Northern Region	42	67
Northwestern Region	7	11
Eastern Region	7	11
Central Region	5	8
Southwestern Region	2	3

**As of November 15, 1984*

Polio Vaccine Recall

Squibb-Connaught, Inc. recently initiated the recall of one lot of inactivated poliomyelitis vaccine Lot Number 4N006 which has an expiration date of November 18, 1984. Poliomyelitis vaccine, purified, is the injectable, inactivated type often referred to as the "Salk" vaccine. It is manufactured by Connaught Laboratories, Ltd. This lot has been found to have had a decrease in potency in the Type 2 poliovirus component during storage. The Type 1 and Type 3 poliovirus components in this lot are completely satisfactory. Because of the decline in Type 2 potency, the vaccine may have produced a lower than expected stimulation of antibody to Poliovirus Type 2 in recipients.

Nine other lots of inactivated poliomyelitis vaccine, all of which have passed their expiration dates, were prepared at the same time as Lot 4N006. These 10 lots include seven lots (283-23, 283-24, 283-25, 283-34, 283-35, 283-42, 285-53) distributed by Elkin-Sinn, Inc. on or after May 4, 1983 and three lots (4N005, 4N006, and 4P012) distributed by E. R. Squibb on or after January 24, 1984.

Individuals having received injec-

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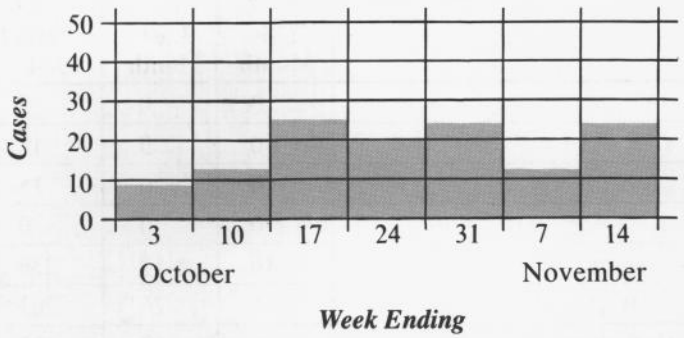
1984-85 Influenza Season

As in past years, sentinel physicians have been enlisted to provide the Division of Epidemiology with a report each week of total patients treated for influenza-like illness. This year there are six physicians reporting from Charlottesville, eight from Arlington County, seven from Petersburg, and nine from Roanoke City. In addition, the Division receives weekly reports from the Naval Medical Clinic in Portsmouth. Surveillance began at the end of September and has demonstrated only background activity to date (*Figure 3*). The state lab (Division of Consolidated Laboratory Services, Department of General Services) has not yet reported any laboratory-confirmed influenza, either by virus isolation or serology.

Influenza surveillance data will be summarized periodically in the *Bulletin* during the coming season. Each district health department will also be able to obtain weekly summaries using computer telecommunications. Weekly summaries are currently posted by the Division on the Public Health Network's electronic bulletin board for Virginia and can be obtained by entering GTE TELENET's MINET (MED/MAIL) system. Once in the system, type "CHECK PHN.VA.BB" and then "SCAN" when the prompt informs you that the bulletin board is being used. Physicians with computers, telecommunications equipment, and accounts with TELENET who are interested in receiving influenza summaries electronically should call the Division at (804) 786-6029 for further information. Electronic summaries are more current than those printed in the *Bulletin* because printing and mailing delays are avoided. They also provide a breakdown of the reports by region. Earlier recognition of influenza outbreaks will permit the more timely use of the prophylactic agent *amantadine*.

Figure 3. Cases of Influenza-like Illness Reported by Sentinel Physicians (N = 30) Virginia 1984



Pentamidine Isethionate Commercially Available

On October 16, 1984, pentamidine isethionate was approved by the U.S. Food and Drug Administration for the treatment of *Pneumocystis carinii* pneumonia. Hospital pharmacies can purchase pentamidine isethionate either through pharmaceutical wholesalers or directly from LyphoMed, Inc. Since pentamidine isethionate is now commercially available, CDC will no longer continue to supply this drug.

All product requests should be directed to:

LyphoMed, Inc.
2020 Ruby Street
Melrose Park, Illinois 60160

In an emergency, pantamidine isethionate can be obtained by calling (312) 345-9746.

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tions from inactivated poliomyelitis virus vaccine with any of the lot numbers listed above should be considered to be inadequately immunized against Type 2 Póliomyelitis and be considered for revaccination. This includes all individuals immunized between May 4, 1983 and May 9, 1984, and some of the individuals immunized between May 9, 1984 and the present (see below).

From May 9, 1984 to the present, eight other lots of inactivated poliovirus vaccine also have been distributed by E. R. Squibb and Sons, Inc. Although these lots currently have adequate potency, their stability cannot be assured throughout their dating periods. These lots are listed below:

Lot Number	*Expiration Date*
4R031	April 23, 1985
4S032	April 23, 1985
4T033	June 3, 1985
4T034	June 3, 1985
4T039	June 15, 1985
4U040	July 5, 1985
4V046	January 20, 1986
4V052	January 20, 1986

Individuals who have been vaccinated with any of these lots are adequately immunized. However, use of these lots should be discontinued and they should be returned to E.R. Squibb and Sons for replacement or credit (health departments should return their lots to Jim Thomson at the Bureau of Pharmacy Services in Richmond).

An individual who received inactivated poliomyelitis vaccine after May 9, 1984 and is not known to have received one of the satisfactory lots of vaccines, should be considered inadequately immunized against the Type 2 component and be considered for revaccination.

There is no problem with the Sabin oral poliomyelitis vaccine, which is the type of vaccine predominantly used.

If you have questions regarding this announcement, call Dr. Shirley E. Johnson, Connaught Laboratories Ltd. at (416) 667-2622. Health departments may call Jim Farrell, Immunization Section, VDH, at (804) 786-6246.

Continued from page 1.

References

1. Centers for Disease Control. Leading work-related diseases and injuries—Untied States. MMWR 1983;32: 189-91.
2. Swajian GR. Carpal tunnel syndrome: a five-year study. J. Am Osteopath Assn 1981; 81: 103-5.
3. Birkbeck MQ, Beer TC. Occupation in relation to the carpal tunnel syndrome. Rheumatol Rehabil 1975; 14: 218-21
4. Armstrong TJ, Chaffin DB. Carpal tunnel syndrome and selected personal attributes. J Occup Med 1979; 21: 481-6.
5. Cannon LJ, Bernacki EJ, Walter SD. Personal and occupational factors associated with carpal tunnel syndrome J Occup Med 1981; 23: 255-8.

Month: November, 1984

Disease	State				Mean 5 Year To Date	Regions				
	This Month	Last Month	Total to Date 1984	1983		This Month N.W.	N.	S.W.	C.	E.
Measles	0	0	5	23	133	0	0	0	0	0
Mumps	0	0	17	35	73	0	0	0	0	0
Pertussis	0	0	15	49	22	0	0	0	0	0
Rubella	0	0	0	2	53	0	0	0	0	0
Meningitis—Aseptic	16	32	236	313	248	0	6	3	6	1
**Bacterial	5	26	203	218	184	1	3	0	1	0
Hepatitis A (Infectious)	11	13	102	118	206	0	2	9	0	0
B (Serum)	33	47	456	493	469	2	17	5	8	1
Non-A, Non-B	3	7	83	75	**56	0	0	2	1	0
Salmonellosis	115	113	1,202	1,364	1,297	7	40	16	29	23
Shigellosis	7	8	186	208	394	0	6	0	0	1
Campylobacter Infections	62	49	582	510	**286	16	19	8	6	13
Tuberculosis	27	23	401	467	—	—	—	—	—	—
Syphilis (Primary & Secondary)	37	35	434	527	545	0	2	7	7	21
Gonorrhea	1495	1736	18,204	19,413	20,213	—	—	—	—	—
Rocky Mountain Spotted Fever	0	0	46	60	85	0	0	0	0	0
Rabies in Animals	10	12	196	590	286	5	5	0	0	0
Meningococcal Infections	6	6	60	77	76	1	3	1	1	0
Influenza	19	2	1123	902	1487	8	0	11	0	0
Toxic Shock Syndrome	0	0	7	7	7	0	0	0	0	0
Reyes Syndrome	0	0	6	6	13	0	0	0	0	0
Legionellosis	3	3	28	23	20	0	0	0	2	1
Kawasaki's Disease	0	1	13	36	20	0	0	0	0	0
Other:										

Counties Reporting Animal Rabies: Augusta 1 skunk, 2 raccoons; Fauquier 1 raccoon; Louisa 1 raccoon; Arlington 1 raccoon; Fairfax 1 raccoon; Loudoun 3 raccoons.

Occupational Illnesses: Carbon monoxide poisoning 41; Carpal tunnel syndrome 12; Pneumoconiosis 7; Asbestosis 6; Hearing loss 4; Dermatoses 3.

**4 year mean
*other than meningococcal

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