



# EPIDEMIOLOGY BULLETIN

James B. Kenley, M.D., Commissioner  
Grayson B. Miller, Jr., M.D., Epidemiologist

EDITOR: Carl W. Armstrong, M.D.

## WHIRLPOOL DERMATITIS

Two outbreaks of "whirlpool dermatitis" have been reported in Virginia. The first occurred in 1975 among members of an out-of-state high school class who were visiting Virginia on a field trip.<sup>1</sup> The group spent two nights in a motel whose facilities included a whirlpool and an indoor swimming pool. During the ensuing five days, 49 of 73 students (67%) developed skin rashes which were located primarily on the stomach, legs, arms, and buttocks. The rashes were described as pustular or vesicular in 30 of the 49 affected students and, in the rest, as macular or maculopapular. An epidemiologic investigation demonstrated that dermatitis was significantly associated with using the motel's whirlpool. Seventy percent of the students who had used the whirlpool developed a rash, whereas no rashes developed among those who did not use the whirlpool. Cultures from the skin lesions of four of the ill students grew Pseudomonas aeruginosa. These isolates were submitted to the Centers for Disease Control, and all were identified as serotype 0-11. Thirty-eight environmental cultures were taken, only two of which grew P. aeruginosa. Both were serotyped; one was non-typable, and the other was identified as belonging to serogroup 0-11. This latter sample had been taken from a pool deck drain. The whirlpool had been drained, refilled and re-chlorinated between the time of the outbreak and the time the whirlpool water was cultured. These measures may have accounted for the inability to grow P. aeruginosa from the whirlpool water.

The most recent outbreak occurred in February of this year, was associated with a private health spa, and affected at least 12 patrons. The skin rashes were located on the legs, stomach, and buttocks. Pseudomonas folliculitis was suspected by the private physician of one of the patrons, but no cultures were taken. The ill patrons all reported having used either the indoor swimming pool or the whirlpool at the spa anywhere from two to six days before the onset of their rashes. A water sample taken from the main pool, one week following the onset of illness, grew P. aeruginosa.

Editor's comment: Whirlpool-associated rashes can often be clinically distinguished from other forms of folliculitis by the relatively sharp demarcation between the involved areas below the shoulders, and the uninvolved areas above.<sup>2</sup> This demarcation is due to the patient's previous level of immersion in the whirlpool. Serotype 0-11 P. aeruginosa has been the etiologic agent most often implicated in outbreaks of rash illness associated with whirlpools.<sup>3</sup> The reasons for the frequent recovery of this particular serotype are not known. Proper maintenance of whirlpools is necessary to prevent these outbreaks, and requires that close attention be paid to chlorination, in view of the water's high temperature and turbulent flow.

<sup>1</sup>MMWR 1975; 24: 349-350.

<sup>2</sup>JAMA 1978; 239: 2362-2363.

<sup>3</sup>AJPH 1976; 66: 1092-1093.

FACT SHEET ON KAPOSI'S SARCOMA (KS)

Due to recent public interest and media attention regarding Kaposi's Sarcoma, the following fact sheet, written in layman's terms, has been prepared as an aid for answering related questions.

1. What is Kaposi's Sarcoma (KS)? KS is a tumor which usually involves the skin. Internal organs, especially the gastrointestinal tract, are occasionally (10%) involved as well.
2. What are the symptoms of KS? KS begins as reddish-brown to purple skin spots, usually on the feet or legs. These may resemble bruise marks, although they tend to persist rather than fade, and they have sharper margins. As the tumor progresses, these spots become raised and may merge together. Edema (fluid swelling) of the involved area may also be noted.
3. How is KS acquired? No one knows how KS is acquired. Evidence indicates that a virus, called cytomegalovirus or CMV, may play a role in the cause of the tumor in persons who are possibly predisposed to KS.
4. Which persons are possibly predisposed to KS? KS has been described in elderly males of North America and Europe, in children and young adults in Africa, in patients with lowered immunity either due to medication or an underlying disease, in previously healthy homosexual men, in previously-healthy abusers of IV drugs, and in heterosexual, non-drug-abusing Haitian refugees in the U.S.
5. How common is KS? KS is considered a rare tumor. For the U.S. population as a whole, one case is seen for every 1.6 to 5 million unaffected people.
6. Has KS been diagnosed in Virginia? Ten cases of KS have been reported to the Virginia Tumor Registry from 1970 through 1981. Cases were evenly distributed in time, and the average age of the KS patients was 75 years (range 63-86 years).
7. Are other medical conditions seen along with KS? Traditionally, an association between KS and the occurrence of other tumors, such as lymphoma or leukemia, has been noted. Recently, especially among younger homosexual patients, KS has been found to occur in association with one or more infections usually associated with lowered immunity.
8. How is KS diagnosed? A physician can strongly suspect the diagnosis based on the characteristic appearance of the skin spots or bumps. The diagnosis is confirmed by taking a biopsy and examining the tissue under a microscope.
9. What happens when KS is diagnosed? Both radiation therapy and chemotherapy (medication) have been used with some success. Traditionally, life expectancy after KS has been diagnosed has varied from several weeks to 50 years, with an average of 8-10 years. More recently, homosexual patients with KS have generally had a more rapidly fatal course.

### ADVISING TRAVELERS

Physicians who are asked by their patients to provide health advice regarding international travel may wish to consult the following:

- A. For vaccination requirements (including certificate validation):
  1. Contact your local health department, or
  2. Contact the Division of Epidemiology (804) 786-6261, or
  3. Obtain a copy of Health Information for International Travel, available (for sale) through the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Information in this booklet is used by State and Local Health Departments, and any changes are updated on a weekly basis.
  
- B. For recommendations regarding malaria chemoprophylaxis, immune serum globulin (ISG), vaccinations other than those required for travel, and general preventive measures:
  1. Information on malaria risk, by country, is available through any of the sources listed above.
  2. General information regarding other vaccinations e.g. against meningococcal disease, polio, typhoid fever, plague etc., and regarding preventive measures for traveler's diarrhea, parasitic infections and hepatitis A, is contained in both Health Information for International Travel (see above), and The Medical Letter 1981;23: 105-108.
  3. A physician will need to interpret this general information in light of each patient's health status and travel itinerary before making specific recommendations for an individual.

### ANNOUNCEMENTS

On August 16, A. Martin Cader, M.D., assumed the position of Director, Bureau of Communicable Diseases. He was Director of Health for Henrico County from 1976 to 1978 and, until his current appointment, was involved in utilization review activities for the Medicaid Program. Dr. Cader did his clinical training in pediatrics, including a fellowship in pediatric hematology-oncology.

On August 23, Brandon S. Centerwall, M.D., joined the Division of Epidemiology as a one year assignee from the Centers for Disease Control's (CDC) Epidemic Intelligence Service. Dr. Centerwall completed his undergraduate studies at Yale University, received his M.D. degree from the University of California at San Diego, and his M.P.H. degree from Tulane University. Before coming to Virginia, Dr. Centerwall had been assigned to CDC's Center for Health Promotion and Education, where he studied the epidemiology of homicides and other forms of violence.

August, 1982

MONTH: \_\_\_\_\_

DISEASE	STATE					REGIONS				
	THIS MONTH	LAST MONTH	TOTAL TO DATE		MEAN 5 YEAR TO DATE	THIS MONTH				
			1982	1981		N.W.	N.	S.W.	C.	E.
CHICKENPOX	24	47	803	1601	897.0	0	1	0	2	21
MEASLES	0	0	14	7	1215.6	0	0	0	0	0
MUMPS	2	1	33	118	95.8	0	0	0	0	2
PERTUSSIS	1	8	18	6	9.0	0	0	1	0	0
RUBELLA	0	2	13	5	211.6	0	0	0	0	0
MENINGITIS - ASEPTIC	33	32	108	134	106.0	3	2	4	11	13
BACTERIAL	18	19	136	158	116.4	0	0	2	4	12
ENCEPHALITIS - INFECTIOUS	3	5	22	29	20.0	0	0	0	1	2
POST-INFECTIOUS	0	0	1	3	6.0	0	0	0	0	0
HEPATITIS A (INFECTIOUS)	14	14	125	144	182.6	1	1	3	0	9
B (SERUM)	47	55	322	336	276.2	4	11	6	10	16
SALMONELLOSIS	234	189	980	1086	701.8	21	31	39	57	76
SHIGELLOSIS	17	13	103	1041	283.4	8	0	1	4	4
TUBERCULOSIS - PULMONARY	35	57	369	367	-	-	-	-	-	-
EXTRA-PULMONARY	8	13	70	74	-	-	-	-	-	-
SYPHILIS (PRIMARY & SECONDARY)	44	57	415	461	372.2	2	4	0	13	25
GONORRHEA	1375	1928	13,322	14,767	15281.8	-	-	-	-	-
ROCKY MOUNTAIN SPOTTED FEVER	20	23	62	92	91.2	3	0	4	9	4
RABIES IN ANIMALS	54	67	371	70	20.8	10	42	1	0	1
MORBILLIVIRUS INFECTIONS	7	6	49	73	51.8	0	1	0	2	4
INFLUENZA	7	8	314	4878	2602.8	0	0	2	0	5
MALARIA	2	5	28	20	23.0	0	2	0	0	0
OTHER: <i>Hepatitis Unspecified</i>	8	7	70	126	114.6	2	0	0	0	6

COUNTIES REPORTING ANIMAL RABIES: Clarke 1 sk; Fairfax 16 rc; Fauquier 3 rc; Frederick 1 sk; Loudoun 23 rc; Page 2 sk; Prince Wm. 1 rc, 1 cat; Rockingham 1 rc, 1 sk; Scott 1 cat; Shenandoah 1 sk; Suffolk 1 bat.

OCCUPATIONAL ILLNESSES: Occupational pneumoconioses 9, occupational hearing loss 14; Asbestosis 1; Mesothelioma 2; Trichloroethylene inhalation 1; Nitrogen Dioxide poisoning 15

Published Monthly by the  
**VIRGINIA HEALTH DEPARTMENT**  
 Division of Epidemiology  
 109 Governor Street  
 Richmond, Virginia  
 23219

Bulk Rate  
 U. S. POSTAGE  
**PAID**  
 Richmond, Va.  
 Permit No. 1225