



EPIDEMIOLOGY BULLETIN

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PENICILLINASE-PRODUCING NEISSERIA GONORRHOEAE

An important recent event in the epidemiology of venereal disease has been the emergence of strains of gonococci which are totally resistant to penicillin. These strains produce an enzyme, beta-lactamase (penicillinase) which destroys penicillin and renders it ineffective in the treatment of gonorrhea. During the period January - April 1980, 186 cases of Penicillinase-Producing Neisseria gonorrhoeae (PPNG) were reported to the Center for Disease Control. This reflects a 66.1% increase in cases of PPNG compared to the same period in 1979.

In Virginia, seventeen epidemiologically related cases were identified from May 6 - July 24, 1980. The initial outbreak of PPNG infections began at Fort Lee near Petersburg. By late June, cases of PPNG were being reported from the cities of Hampton and Newport News. Six chains of infection were identified and two of these chains extended as many as four generations of spread. Of the seventeen cases in the outbreak, 47% involved military personnel that had received their initial gonorrhea diagnosis and treatment at Kenner Army Hospital, Fort Lee. Epidemiological investigations performed on all cases failed to link any infections with the Far East.

Until the recent outbreak of PPNG, Virginia had reported no cases in over two years. While these outbreaks appear to be sporadic and limited in scope, they serve as an alert to the possibility that more widespread dissemination could follow. As this issue of the Epidemiology Bulletin was being printed additional cases in Fairfax County and the City of Richmond were being reported. These cases will be dealt with in subsequent issues.

The Division of Epidemiology, Virginia State Health Department, and the Center for Disease Control recommend the following procedures be followed regarding testing and treatment of PPNG infections:

1. All patients treated for gonorrhea should be treated according to the Center for Disease Control 1979 Treatment Schedules.*
2. Patients should return for a post-treatment culture 3-7 days after completion of treatment (test-of-cure).
3. All positive test-of-cure cultures should be screened for penicillin resistance, with all resistant isolates being tested for beta-lactamase production. The Division of Consolidated Laboratory Services will gladly assist with the confirmation tests. The penicillin susceptibility tests are routinely performed on all public health laboratory cultures clearly identified as test-of-cures.

4. Patients with uncomplicated anogenital gonorrhea with a positive test for PPNG should be treated with 2 g of spectinomycin, intramuscular (IM). Repeat test-of-cure cultures should be obtained 3-7 days after the spectinomycin therapy. (Consider throat and rectal cultures).
5. Upon finding an isolate suspected of penicillinase production, and in accordance with State Board of Health Regulations, all cases should be reported to either the local or State Health Department.
 - a) Contact tracing should be initiated immediately, with all contacts having throat and rectal as well as cervical and urethral cultures. All contacts should be prophylactically treated with spectinomycin 2gm IM. All positive cultures from contacts should be tested for penicillin resistance. All contacts with a positive culture should have a test-of-cure done in 3-7 days.
 - b) The State VD office will be glad to coordinate all penicillin resistant isolates. Please contact the area health department supervisor listed below for assistance:

Central District - 804/257-6066
 Mr. Will Wooding
 1301 Roseneath Road
 Richmond, Va. 23230

Eastern District - 804/460-5314
 Mr. Wyatt Crute
 5700 Thurston Ave., #203
 Virginia Beach, Va. 23455

Northeast District - 804/257-6066
 Mr. Will Wooding
 (c.o Central District Address)

Northern District - 703/591-3750
 Mr. Jim Ludwig
 4080 Chain Bridge Rd.
 Fairfax, Va. 22030

Southwest District - 703/982-7411
 Mr. Marvin Morrison
 1314 Peters Creek Rd., N.W.
 Suite 130
 Roanoke, Va. 24017

TREATMENT RECOMMENDATIONS FOR OTHER SPECIFIED PPNG SITUATIONS**

Early use of effective treatment will minimize the spread of, and complications from, PPNG infections. CDC is now specifically recommending spectinomycin 2 g IM for the initial treatment of uncomplicated anogenital gonorrhea in patients who have recently returned from countries, such as the Philippines, Singapore, and Thailand, that have areas of high prevalence of PPNG infections.

There are, as yet, no published studies on the treatment of PPNG-associated salpingitis and PPNG pharyngeal infections. Spectinomycin and cefoxitin appear effective in the treatment of salpingitis caused by penicillin-sensitive gonococci and are definitely effective in urethritis caused by PPNG. However, these two drugs may be relatively ineffective for pharyngeal gonococcal infection. The fixed-combination antimicrobial sulfamethoxazole/trimethoprim has been used to treat pharyngitis caused by penicillin-sensitive gonococci and may be effective for PPNG urethritis.

Pending definitive studies, the CDC recommends the following regimens:

For salpingitis associated with endocervical PPNG infection:

1. Outpatients - spectinomycin 2 g IM daily for 5-10 days.
2. Inpatients - cefoxitin 2 g IM or IV every 8 hours for 5-10 days.

Because experience with treatment of this infection is very limited, hospitalization of most patients may be advisable.

For PPNG pharyngeal infection:

Sulfamethoxazole/trimethoprim 9 tablets (400 mg sulfamethoxazole/80 mg trimethoprim per tablet) daily for 5 days.

*Copies of the Center for Disease Control Recommended Gonorrhea Treatment Schedules includes recommendations for treatment of uncomplicated gonococcal infections, PPNG, treatment in pregnancy, acute salpingitis (PID), management of prenatal and childhood disease, and other treatment information. A copy may be obtained by writing to the Virginia Department of Health, Division of Epidemiology or by calling 804/786-6261.

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ORAL POLIO VACCINE UPDATE

Beginning in November 1980, all oral poliovirus vaccine marketed in the United States by Lederle will be gradually replaced by a new product which is identical except additional sweetener (sorbitol) will have been added. The change will make the vaccine thicker so that a new dropper will be needed for 10-dose vials. The new dropper will have a white plastic screw cap instead of the yellow cap used with the current dropper. These two droppers are not interchangeable; each should be used only with its corresponding vaccine.

The first shipments of this vaccine from the State Department of Health to local health departments will include a notice from the State Pharmacist about the new dropper. Each package also will include a "New Dropper" caption.

UNIVERSITY OF VIRGINIA - SYMPOSIUM ON HOSPITAL INFECTIONS

The Sixth Annual Symposium for Clinicians on Hospital Infection Control will be held November 13 and 14 at the Boar's Head Inn in Charlottesville. The broad range of topics includes antibiotic resistance, susceptibility testing, new antibiotics, pneumococcal vaccine, the SENIC data, the future of infection control and others. A cast of 13 speakers includes Dr. Robert Austrian, Dr. Theodore C. Eickhoff, and Dr. William Schaffner.

The deadline for preregistration is November 1, 1980, and the fee is \$75 per person which includes dinner Thursday night. For programs or information write: Hospital Epidemiology Secretary, University of Virginia Medical Center, Box 473, Charlottesville, Va. 22908. Phone: (804) 924-2777 or 924-2778.

MONTH: AUGUST

DISEASE	STATE					REGIONS				
	THIS MONTH	LAST MONTH	TOTAL TO DATE		MEAN 5 YEAR TO DATE	THIS MONTH				
			1980	1979		N.W.	N.	S.W.	C.	E.
CHICKENPOX	27	31	372	930	909.4		16	4	2	5
MEASLES	1	5	301	267	1314.8				1	
MUMPS	7	2	56	82	249.2				1	6
PERTUSSIS	2	2	6	10	10.8	1	1			
RUBELLA		2	50	200	311.8					
MENINGITIS - ASEPTIC	41	21	96	121	71.2	7	2	12	4	16
BACTERIAL	16	15	129	121	83.2	3	3	7	1	2
ENCEPHALITIS - INFECTIOUS	6	8	17	22	16.0	1		2		3
POST-INFECTIOUS	1		3	13	6.0					1
HEPATITIS A (INFECTIOUS)	28	20	205	190	215.8	5	4	4	6	9
B (SERUM)	58	37	363	309	196.2	4	16	4	18	16
SALMONELLOSIS	163	124	759	715	479.8	24	15	22	46	56
SHIGELLOSIS	20	6	79	199	110.6	2	3	14		1
TUBERCULOSIS - PULMONARY	41	31	354	388	446.2					
EXTRA-PULMONARY	6	7	72	78	71.2					
SYPHILIS (PRIMARY & SECONDARY)	54	40	376	326	377.8	4	7	6	15	22
GONORRHEA	2,830	1,783	14,858	15,425	16155.6					
ROCKY MOUNTAIN SPOTTED FEVER	32	19	73	75	92.6	8	3	8	9	4
RABIES IN ANIMALS	4	2	12	13	33.2	1	1	1	1	
MENINGOCOCCAL INFECTIONS	8	4	44	68	39.0		2	2	2	2
INFLUENZA	1	5	762	346	5553.8					
MALARIA	7	8	48	18	12.0		4		1	2
OTHER: <i>KAWASAKI'S DISEASE</i>	1	1	10	16	N/A					1
<i>LEPTOSPIROSIS</i>	1		1	1	N/A					1
<i>REYE'S SYNDROME</i>	1		23	19	8.8			1		
<i>TOXOPLASMOSIS</i>	3		7		N/A	1			2	
<i>TRICHINOSIS</i>	1	1	2	2	1.4		1			

COUNTIES REPORTING ANIMAL RABIES: Shen. - 1 fox; Rich. City, L'burg City, Pr. Wm. - 1 bat each
 OCCUPATIONAL ILLNESSES: Occupational pneumoconiosis 10, Occupational dermatitis 1, Occupational hearing loss 2, Asbestosis 2, Suberosis 1, Byssinosis 2.

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