



Reported Morbidity  
May, 1981

# MONTHLY MORBIDITY REPORT

Provisional Statistics

from

EPIDEMIOLOGY UNIT AND PUBLIC HEALTH STATISTICS

## Spectinomycin-Resistant Penicillinase-Producing

### *Neisseria gonorrhoeae* — California

The David Grant United States Air Force (USAF) Medical Center at Travis Air Force Base (AFB), California, has reported the first known infection caused by spectinomycin-resistant penicillinase-producing *Neisseria gonorrhoeae* (PPNG). Spectinomycin is the antibiotic of choice for the treatment of most PPNG infections.

The patient, a 20-year-old man, had been stationed at Clark AFB, Republic of Philippines. From April 24-30, 1981, he was seen 3 times at the Clark AFB Clinic for treatment of persistent gonococcal urethritis. During each visit he was given an intramuscular injection of spectinomycin, 2.0 g the first time and 4.0 g each of the next 2 times, but he remained symptomatic. Although he had had sexual contact with 3 women in the Philippines from March 6 through April 19, he denied being re-exposed after he began treatment. Cultures of the urethral discharge grew PPNG.

He returned to the United States, and on May 3 he was seen at the David Grant USAF Medical Center because of a persistent urethral discharge. Gram-stain examination was consistent with gonorrhea; he received tetracycline hydrochloride, 500 mg orally every 6 hours for 5 days. Culture of the urethral discharge that had been taken before treatment was begun grew PPNG. The growth of this isolate was not inhibited by a disc containing 100 µg of spectinomycin. The patient's symptoms resolved completely, and cultures of posttreatment urethral specimens were negative. He denied having had any sexual contact in the United States since his return.

CDC has confirmed that a subculture of the gonococcal isolate is PPNG, resistant to more than 2,048 µg/ml of spectinomycin. Minimal inhibitory concentrations of other antimicrobials for this isolate included tetracycline, 1 µg/ml; cefoxitin, 1.0 µg/ml; gentamicin, 2.0 µg/ml; and sulfamethoxazole/tri-

methoprim (SMX/TMP), 9.5 µg/ml of SMX and 0.5 µg/ml of TMP, when the combination was tested in a 19:1 ratio. Studies to characterize the mechanism of spectinomycin resistance in this isolate are in progress.

Surveillance for PPNG strains is ongoing at Clark AFB and will be extended to include testing for spectinomycin resistance.

**Editorial Note:** Although 4 isolates of spectinomycin-resistant *N. gonorrhoeae* have been reported previously — 2 from Denmark, 1 from Holland, and 1 from the United States — none was penicillinase producing (1-3). Of more than 1,000 PPNG isolates tested at the CDC since 1976, this is the first to be resistant to spectinomycin.

CDC recommends that all PPNG isolates be tested for spectinomycin resistance using a provisional disc-diffusion method (4). Such testing should assist in the early detection and treatment of cases and in determining the prevalence of spectinomycin resistance among PPNG isolates. A protocol for the provisional disc-diffusion method is available from either state health department laboratories or CDC. If it is not possible for a laboratory to use this method, PPNG isolates should be forwarded to state health department laboratories for testing or for referral to CDC. In order to develop more information on the use of this test, CDC recommends that all spectinomycin-resistant PPNG isolates be sent to state health department laboratories and CDC for confirmatory testing. Confirmed cases should be reported to state health departments and CDC.

Patients who have uncomplicated anogenital infections caused by spectinomycin-resistant PPNG should be treated with cefoxitin, 2.0 g in a single intramuscular injection, and with probenecid, 1.0 g orally. Another regimen which can be used is SMX/

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TMP, 9 tablets (400 mg SMX and 80 mg TMP/tablet) taken orally in single daily doses for 3 days (total: 27 tablets). This latter regimen can be used for 5 days to treat pharyngeal infections. (SMX/TMP should not be prescribed for pregnant women or those with nursing infants.) Although a tetracycline regimen was used successfully for the reported case, overall cure rates with tetracycline therapy for PPNG infections have been relatively low.

#### REFERENCES

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## SELECTED REPORTABLE DISEASES (By Place of Residence)

STATE AND PARISH TOTALS REPORTED MORBIDITY MAY, 1981	VACCINE PREVENTABLE DISEASES					ASEPTIC MENINGITIS	HEPATITIS A AND UNSPECIFIED	HEPATITIS B	LEGIONNAIRES DISEASE	MALARIA **	MENINGOCOCCAL INFECTIONS	SHIGELLOSIS	TUBERCULOSIS, PULMONARY	TYPHOID FEVER	OTHER SALMONELLOSIS	UNDERNUTRITION SEVERE	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY	RABIES IN ANIMALS (PARISH TOTALS CUMULATIVE, 1981)
	MEASLES	RUBELLA*	MUMPS	PERTUSSIS	TETANUS														
TOTAL TO DATE 19 80	11	8	55	4	1	21	333	94	0	29	49	131	173	0	31	1	9113	511	6
TOTAL TO DATE 19 81	0	9	3	4	0	20	333	136	0	3	79	27	159	0	53	1	8391	672	15
TOTAL THIS MONTH	0	1	0	1	0	6	82	22	0	0	14	7	33	0	8	0	1658	154	1
ACADIA													1				15		
ALLEN							1	1									1		
ASCENSION				1													3	1	
ASSUMPTION																			
AVOYELLES																			
BEAUREGARD																	7		
BIENVILLE													2				2		3
BOSSIER						2					1	1					20	4	1
CADDO											1	3	2		3		187	6	1
CALCASIEU						3					2		2				73	6	
CALDWELL																			
CAMERON																			
CATAHOULA							2												
CLAIBORNE																	2		
CONCORDIA																	1		
DESOTO																			
EAST BATON ROUGE							4				2		1				137	19	
EAST CARROLL																	4	3	
EAST FELICIANA																	2		
EVANGELINE							3	1									5		
FRANKLIN																	1		
GRANT							2										1		
IBERIA											1				1		18		
IBERVILLE								1									5	2	
JACKSON																	4		
JEFFERSON							21	4			1		1				144	14	
JEFFERSON DAVIS								1									13		
LAFAYETTE							1	2					1				51	2	
LAFOURCHE						1	1				1						2		
LASALLE																	1	1	
LINCOLN																	11	1	
LIVINGSTON							3	1									3		
MADISON		1															2		
MOREHOUSE																	9	1	
NATCHITOCHES								1									2	1	6
ORLEANS							13	2			2	1	15		1		659	64	
OUACHITA							3	1					1				76	4	
PLAQUEMINES																	7		
POINTE COUPEE																			
RAPIDES							5						1				49	1	2
RED RIVER													2						
RICHLAND																	3		
SABINE																	4	1	
ST. BERNARD							4				4				1		2		
ST. CHARLES							1										9	1	
ST. HELENA																	9		
ST. JAMES																			
ST. JOHN							3	1									7	1	
ST. LANDRY												1	2		1		20	9	
ST. MARTIN							1										8	1	
ST. MARY																	3	1	
ST. TAMMANY							5	2				1					10	1	
TANGIPAHOA							2										17	3	
TENSAS							1										2		
TERREBONNE							5	2									2		
UNION																	2		1
VERMILION																	7		
VERNON								1									3	2	
WASHINGTON							1	1											
WEBSTER																	14	2	1
WEST BATON ROUGE																	6		
WEST CARROLL																			
WEST FELICIANA																	1		
WINN													2				1		
OUT OF STATE																	11		

\* Includes Rubella, Congenital Syndrome.

\*\* Acquired outside United States unless otherwise stated.

From January 1, 1981 through May 31, 1981 the following cases were also reported: 1-Leptospirosis; 2-Reyes Syndrome.

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