

TROPICAL AND SUBTROPICAL DISEASES

A Laboratory Study of Venereal Disease as
Neisseria gonorrhoea in Male Patients Over a 7 Month Period

Principal Investigators : Chiraphun Duangmani, M.D.
 Somnuk Vipulyasekha, COL, M.D.*
 John W. Crum, MAJ, USA
 Robert McNair Scott, LTC, MC

Assistants Tatsanee Occeno
 Vitaya Khunguanlert
 Gary Phillip, CPT, USA

OBJECTIVE : To investigate the status of *N. gonorrhoea* as a significant venereal disease in a population of males seen at the Royal Thai Army Hospital, Venereal Disease Clinic and the pattern of penicillin resistant organisms.

BACKGROUND : *Neisseria gonorrhoea* human infection has been followed in this laboratory for a number of years to periodically assess the relative incidence in adults and to note patterns of antibiotic susceptibility found in Thailand. Previous studies did demonstrate a significant change in antibiotic susceptibility patterns (1). An increase in incidence of *Neisseria* Beta-lactamase activity was suggested by routine diagnostic data.

METHOD : Specimens obtained were from urethral discharges in symptomatic males who were seen at the Royal Thai Army Hospital, Venereal Disease Clinic. Purulent discharges were streaked on Thayer Martin Agar, pH 7.2, supplemented with hemoglobin, Isovitalex and Vancomycin, Colistin, Nystatin. All incubations were at 35-37°C, in candle jars, and were observed at 24 and 48 hrs. Isolates identified as typical gram negative diplococci, oxidase positive and fermenting dextrose, sucrose and maltose were presumed *N. gonorrhoea*. Penicillin minimum inhibitory concentration tests by the agar plate dilution methods in 18 concentrations from 0.05 through 5.00 units per milliliter were performed. In penicillinase producing *N. gonorrhoea* b-lactamase activity was assessed by an agar plate penicillin disk streptococcal permissive growth method.

RESULTS : Data are presented with pertinent case numbers in the table and is summarized as; the number of symptomatic patients seen, 171; the number of *N. gonorrhoea* isolates, 105; the number of patients seen more than once, 11; the number of isolates from same patient, 4; the number of PPNG isolates, 8; and the number of PPNG isolates from the same patient, 1.

Sixty-two percent of the symptomatic patients had gonorrhoea and fifty-six percent of those patients seen more than once had repeat infections. Eight percent of the *N. gonorrhoea* isolates were PPNG positive and of those one percent were repeat infections over the period studied. The pattern of penicillin susceptibility in MICs indicated that 55% of the specimens responded between

* Chief of Medicine, Royal Thai Army Hospital

0.4 and 1.2 units/milliliter.

It is apparent from the results that a periodic bacteriological survey on an annual basis is necessary in order to keep abreast of the clinical and laboratory facets of *N. gonorrhoea* infections in Thailand in order to provide information for appropriate treatment and prevention.

REFERENCE :

1. Spence, M.R., et al. : Changing penicillin resistance of the gonococcus in Thailand, J. Am. Vener. Dis. Assoc.; 3(1):32-4, Sept. 76.

