

Gonococcal Pharyngitis

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INTRODUCTION

Gonorrhea, a sexually transmitted infection caused by the organism *Neisseria gonorrhoeae* (NG) infecting the urogenital tract, was originally described by Hippocrates in the fourth century B.C. The first documented cases of pharyngeal infections by NG causing symptomatic pharyngitis in homosexual males was described by Fiumara in 1967.¹ Pharyngeal infection with NG in the absence of symptoms was first reported in 1972.² Despite the original association of pharyngeal NG with oral homosexual practices, transmission of the disease has been well documented to occur in oral heterosexual practices and may be asymptomatic in as much as 80% of cases.^{3,5} A history of oral sexual practices may be found in 80% of infected heterosexual patients if discretely questioned.³ As the throat is a reservoir for numerous bacteria, NG must be differentiated from similar bacteria. Furthermore, multiple cultures may be required to find the organism making repeated diagnostic or "test of cure" cultures necessary.⁴

The incidence of reported NG infections (all types) in the Philippines has increased from 6,432 cases (6.1 per 100,000 population) in 1981, to 15,329 cases (28 per 100,000) in 1985.⁶ Basaca-Sevilla et al in their survey of 16 areas of the Philippines in 1980, reported a prevalence of 4.9% among female bar workers ("hospitality girls"),⁷ while Tupasi et al in their 1984 survey of four areas of the Philippines reported an overall prevalence of 7.1% in similarly employed people.⁸ Pharyngeal NG infections have been reported in the Philippines, occurring in both female and heterosexual males, and associated with oral-genital transfer.^{9,10}

This paper will describe two fully documented cases of pharyngitis due to NG in patients who sought consultation and treatment because of persistent cough, sore throat and hoarseness unresponsive to standard medical treatment.

CASE REPORTS

Case 1

A thirty-three year old, married female laboratory technician sought consultation for persistent hoarseness of four weeks duration. Examination of the throat revealed a markedly congested pharynx. A throat swab was obtained and streaked onto blood and chocolate agar plates. The patient was started on ampicillin therapy, 500 mgs orally TID. After original growth on the chocolate agar plate, suspicious colonies were transferred to Thayer-Martin media. Colonies then grew abundantly on Thayer-Martin and were confirmed as NG using GO Chek, a commercially available modified sugar fermentation test (Roche Diagnostics). No drug sensitivity studies were performed at that time.

The patient's treatment was changed to tetracycline 1 gram BID and norfloxacin 400 mg. QD, both for a ten day period. Further interview revealed that the patient and her husband were

practicing oral sex activities. The husband was brought for examination and found to have a urethral discharge from which NG was subsequently cultured.

However, the patient showed no signs of clinical improvement following ten days of tetracycline-norfloxacin therapy. A repeat pharyngeal culture was obtained and found to still be positive for NG. She was then placed on ciprofloxacin 250 mg. BID for ten days. Following this treatment her symptoms cleared and a final pharyngeal culture was negative for NG.

Drug sensitivity testing of the organisms isolated prior to tetracycline-norfloxacin treatment was obtained (Table 1) using the Kirby-Bauer method.¹¹ Beta-lactamase testing was negative by a chromogenic cephalosporin substrate test (Nitrocephin, BBL Inc.)

Case 2.

A thirty-six year old male bookkeeper sought consultation because of persistent sore throat, chronic cough, and intermittent low-grade fever of three months duration. The patient claimed to have seen several physicians including a "quack doctor" who had prescribed several courses of unknown antibiotics and antiseptic lozenges. No apparent clinical improvement was felt. He was referred to an ENT specialist who diagnosed "chronic nonspecific pharyngitis."

On examination, the pharynx was congested and diffusely erythematous. A pharyngeal swab was obtained and streaked onto blood agar, chocolate agar, and Thayer-Martin media. Colonies on the Thayer-Martin were confirmed using the Go Chek method. He was treated with sulfadiazine-trimethoprim (820 mg/180 mg) QD and norfloxacin 400 mg QD for ten days. On questioning he denied oral intercourse at any time. The patient returned to his province and was unavailable for follow-up evaluation. He later reported by telephone that his throat symptoms were cured.

Drug sensitivity testing of the pharyngeal NG isolated prior to treatment was performed as in Case 1 (Table 1). This isolate was also negative for beta-lactamase production.

Table 1. Drug sensitivity testing of Gonococcal Isolates

Kirby-Bauer Test (1)	Case One	Case Two
	(Zone Size in mm.)	(Zone Size in mm.)
Penicillin	24 (R)	20 (R)
Tetracycline	21 (R)	22 (R)
Ceftriaxone	35 (S)	38 (S)
Spectinomycin	22 (R)	25 (R)
Rosoxacin	12 (R) (2)	15 (R) (2)
Ciprofloxacin	26 (S) (3)	25 (S) (3)
Norfloxacin	Not done	Not done
Beta lactamase (Nitrocephin)	Negative	Negative

(1) Procedure and zone sizes from Reference #11 unless otherwise stated. "S" indicates sensitive, "I" as intermediate and "R" as resistant.

(2) Zone sizes for Rosoxacin are "R" ≤ 14, "I" = 15, and "S" ≥ 16 mm. (Personal communication, Sterling-Winthrop International)

(3) Zone sizes for Ciprofloxacin are "S" ≥ 21 mm. (Personal communication, Bayer Philippines)

DISCUSSION

A number of microorganisms, both pathogens and commensals, can be present in the pharynx. Determining the cause of pharyngitis based on clinical manifestations alone is impossible without isolating the organism. In these two patients, the use of Thayer-Martin media and a confirmatory test such as Go Chek simplified the identification of NG. Other identification procedures included the finding of oxidase positivity, and gram stains of the culture showing gram negative diplococci.

Gonococcal pharyngeal infection now appears as another possible cause of chronic symptomatic pharyngitis, and this may serve as a reservoir for spread of the infection. Based on these two cases it is advisable to consider gonococcal infection in the differential diagnosis of symptomatic pharyngitis in sexually active people regardless of history of oral sexual contact, especially if it is unresponsive to standard antimicrobial treatment.

SUMMARY

Gonorrhea is still prevalent in the Philippines and approximately 15,329 cases are reported each year. Two confirmed cases of gonococcal pharyngitis in heterosexuals are described. Physicians should be alerted to this condition, especially in sexually active adults with chronic pharyngitis unresponsive to standard therapy.

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