Pharyngeal gonorrhoea in homosexuals

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Summary
In a prospective survey of 106 male homosexuals, investigations included smears and cultures of material taken from the tonsillar areas.
A diagnosis of gonococcal pharyngitis was made in six cases. This is the largest series so far reported from England. The prevalence of gonorrhoea and less conventional sexual practices must prompt us to investigate gonococcal infection in sites remote from the ano-genital region.

Introduction
Gonorrhoea is one of the most common infectious diseases and its incidence has increased steadily with only minor fluctuations during the last 20 years. Gonorrhoea is common among male homosexuals, and is often asymptomatic when affecting the rectum. Gonorrhoea is also being recognized in other parts of the body. Gonorrhoea of the throat was regarded as rare in the past but may now be more common (King and Nicol, 1975).

Since Fiumara, Wise, and Many (1967) first reported three cases of gonococcal pharyngitis from the U.S.A., this infection has been reported from Scandinavia (Bro-Jørgensen and Jensen, 1971), England (Ratnatunga, 1972; Rodin, Monteiro, and Scrimgeour, 1972), and Holland (Stolz and Schueller, 1974). Interest in this condition, illustrated by a leading article in the British Medical Journal (1974) prompted this survey of male homosexuals.

Material and methods
A study was made of 106 male homosexuals (Table I) who admitted oro-genital contact (fellatio). All had a routine general clinical examination and serological screening.
Smears for Gram-staining and swabs for culture were taken from the pharynx and rectum irrespective of symptoms or signs, and from the urethra if there was urethral discharge. The initial diagnosis of gonorrhoea was based on the demonstration of intracellular Gram-negative diplococci in a stained smear. Cultures were made using selective Phillips Medium Oxoid DSA base with 7 per cent. lysed horse blood without Nystatin, and confirmed by subculture, oxidase reaction, and sugar fermentation tests in serum-free medium (Flynn and Waitkins, 1972). 24 patients were under the age of 20 years, 59 between 20 and 30 years, fifteen between 31 and 40, and eight above 40 years old. 105 patients were British and one French. 91 patients were single, nine married and living with their wives, and six separated. The occupations of the 106 patients varied from artisans to professional men. 34 had previously had a sexually transmitted disease.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>No. of cases</th>
</tr>
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<tbody>
<tr>
<td>None</td>
<td>52</td>
</tr>
<tr>
<td>Rectum (Irritation/pain/discharge)</td>
<td>22</td>
</tr>
<tr>
<td>Urethra (Discharge/dysuria/frequency)</td>
<td>22</td>
</tr>
<tr>
<td>Throat (Irritation and soreness)</td>
<td>8</td>
</tr>
<tr>
<td>Skin (Rash)</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
</tr>
</tbody>
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Results
Of the 106 patients, 65 showed no evidence of gonorrhoea. Of the remaining 41 cases, 24 had only ano-genital infection, and the remaining seventeen showed ano-genital infection plus infection in the pharynx (Table II).

Pharyngeal gonorrhoea Only eight of the 106 patients complained of sore throat and only one had gonococcal pharyngitis.
Fourteen showed intracellular Gram-negative diplococci in stained smears of throat specimens (Table II). Three of these were confirmed by culture. In a further three patients with negative throat smears gonococci grew on culture, giving a total of six patients with confirmed pharyngeal gonorrhoea. Of these seventeen cases, ten showed gonococci in rectal cultures and four had positive results in urethral cultures.

Rectal gonorrhoea A total of 25 cases showed rectal gonorrhoea; Gram-stained smears gave positive results in nineteen cases, and culture was positive in 23 cases.

Urethral gonorrhoea Of the 41 infected patients, thirteen showed Gram-negative diplococci in stained urethral smears, ten being confirmed by culture results.

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Table II also shows the site of infection in those contacts of patients with pharyngeal infection who could be traced. Among the six cases of pharyngeal gonorrhea confirmed by culture, one contact had urethral gonorrhea shown on culture.

**Discussion**

Six (5-7 per cent.) of 106 homosexuals in the present series had pharyngeal gonorrhea; only one of the six complained of a sore throat. This is the largest series reported from England, for only six previous cases have been recorded in three reports (Ratnatunga, 1972; Rodin and others, 1972; Willmott, 1974). Bro-Jørgensen and Jensen (1971) in Denmark found pharyngeal gonorrhea in six (6-3 per cent.) of 95 heterosexual males and in twelve (25 per cent.) of 48 homosexuals (Bro-Jørgensen and Jensen, 1973). Ødegaard and Gundersen (1973) in Norway found 49 (5 per cent.) of 990 heterosexual males to be affected.

In two series from the U.S.A., Owen and Hill (1972) reported this condition in eleven (13-9 per cent.) of 79 homosexuals and Wiesner, Tronca, Bonin, Pedersen, and Holmes (1973) in fourteen (9-8 per cent.) of 143 homosexuals.

Willmott (1974) suggested that the rate of throat infection varied directly with the frequency of oro-genital contact, and geographical variation in incidence must also be affected by differing sexual practices. The results will be influenced by variations in the groups of patients studied, i.e. whether males and females or both, whether homosexuals or heterosexuals, whether selected or unselected. The total number of patients in any particular survey and the clinical and bacteriological techniques used will also affect the findings.

It is noted that, in the present series, in three patients with gonorrhea of the pharynx, the infection appeared only in the rectum of the admitted partner. The connection between these infections must raise questions and suggests a larger study.

I wish to thank Dr. J. B. Bittiner for permission to carry out the trial and Dr. Roy Statham for his help in the construction of this paper. I am grateful for the assistance of social workers and the nursing and secretarial staffs, and also for the consistent support of the Nottingham Public Health Laboratory throughout the investigation.

**References**

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