British Journal of Venereal Diseases, 1978, **54**, 324–325

Unsuspected gonococcal infection in female patients

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SUMMARY Four hundred and ten female patients attending obstetric and gynaecological outpatient departments were investigated for possible gonococcal infection. All were in their reproductive phase. Forty-two (10·2%) of them harboured *Neisseria gonorrhoeae*. Of the infected patients, 40·5% had no symptoms at all. Investigation was carried out using a single, endocervical specimen cultured in Chacko-Nair egg-enriched media.

Introduction

The incidence of gonococcal infection is rising at an alarming rate throughout the world, and the means available to contain it have failed. Numerous factors have been blamed for this rise, including the asymptomatic carrier state in both sexes. Women without symptoms outnumber the men to a large extent (Pariser and Marino, 1970), and they constitute a reservoir of undiagnosed gonorrhoea in the community (Dunlop, 1963; Pariser, 1972; Silverstone *et al.*, 1974; Evans, 1976).

Female populations have been sampled by several workers throughout the world, and widely varying numbers of cases of gonorrhoea have been reported (Waters and Roulston, 1969; Charles *et al.*, 1970; Thin and Michael, 1970; and Silverstone *et al.*, 1974).

To determine the local pattern of unsuspected gonorrhoea in women, we screened symptomatic and asymptomatic patients attending obstetric and gynaecological outpatient departments.

Material and methods

The population for the present study consisted of 410 women attending obstetric and gynaecological outpatient departments at SS Hospital, Banaras Hindu University, Varanasi, between November 1975 and October 1976. All the patients were reporting for the first time, and they were aged between 15 and 45 years, mean age being 25 years. All of them were married. None had taken antibiotics in the preceding two weeks, and none had admitted to previous venereal disease. Most of the patients were of low socioeconomic status.

A detailed medical history and general examination were carried out for each patient. This was followed up by pelvic examination using an unlubricated Cusco's bivalve speculum. An endocervical specimen was collected with a sterile cotton-tipped swab (Evans, 1976), inoculated directly on to Chacko-Nair egg-enriched selective medium (Chacko and Nair, 1968), cross-streaked with a sterile platinum loop, and incubated in a candle extinction jar at 37°C for 48 hours. Suspicious colonies were further examined by Gram-staining and the oxidase test. Oxidase-positive colonies were immediately inoculated on to slopes of four fermentation media containing 1% glucose, maltose, lactose, and sucrose respectively, and incubated for 24 hours to observe acid production. Colonies which showed acid production in glucose-containing fermentation media only were regarded as *Neisseria gonorrhoeae*.

Results

Positive results for *N. gonorrhoeae* were obtained from 42 patients (Table). The highest yield (13·2%) was from patients complaining of vaginal discharge. Seventeen (40·5%) of those with Gram-positive results were asymptomatic.

Table *Primary diagnosis and incidence of gonococcal infection*

Diagnosis	*No. of patients*	N. gonorrhoeae-*positive*	
		No.	%
Pregnancy	188	18	9·57
Vaginal discharge	156	18	13·24
Sterility (primary and secondary)	86	6	6·98

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Received for publication 5 September 1977

Discussion

Asymptomatic women harbouring gonococci have been reported by several authors. Eriksson and Wanger (1975), Waters and Roulston (1969), and Pariser and Marino (1970) reported asymptomatic gonococcal infection in 35·3%, 87·2%, and 90% of patients respectively. Generally, higher rates of infection have been reported from North American clinics (Charles *et al.*, 1970; Prince *et al.*, 1964; Waters and Roulston, 1969) than in Britain (Thin and Michael, 1970; Silverstone *et al.*, 1974).

Our study found an incidence of 40·5% of patients with asymptomatic infection. The difference in percentages could be due to the criteria followed by different authors in their assessment of the asymptomatic state. We found positive results for gonococcal infection in 10·2% of our patients using selective media. This high rate of infection in our patients could be due to the selective media and to the generally low socioeconomic status of our patients.

This disturbingly high incidence of unsuspected gonococcal infection among women is a pointer for medical workers in all specialties to be more vigilant. Unless gonorrhoea is specifically looked for a number of infectious women may escape detection and treatment, thus maintaining a source of infection in the community.

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