Table Infectious syphilis at St. Mary's hospital department of genito-urinary medicine 1985-1989

	1985	1986	1987	1988	1989
Heterosexual men	14	2	10	12	6
Homo/bisexual men	65	25	23	11	10
Women	6	2	9	9	5
Total	85	29	42	32	21
Percentage infected abroad (where geographical location of infection recorded)	22%	26%	38%	57%	71%

patients give a history suggesting infection abroad. Some units in London, however, have reported a recent resurgence of infectious syphilis among heterosexuals.²

Although the results of this retrospective survey must be treated with caution it seems there is no link between infectious syphilis and prostitution in patients attending this unit.

Drug abuse and prostitution are strongly associated with the current heterosexual syphilis epidemic in the USA and this carries with it the risk of increasing HIV transmission within this group.³ Prospective studies are needed to assess the significance of this phenomenon in the UK.

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MATTERS ARISING

Treatment of external genital warts¹

Stone and colleagues state that the patient should be carefully positioned on the ground pad for electrodesiccation. Using the monoterminial technique (as when using the hyfrecator) it is not necessary to use the ground pad. In fact electrodesiccation is usually described as a monoterminial technique.

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Genital warts and the need for screening

An interesting controversy has arisen concerning the benefit of screening for concomitant sexually transmitted diseases (STD) in patients who present to genitourinary medicine departments with genital warts. Malcolm Griffiths¹ argues that such screening of women is of limited value on the evidence of a relatively low prevalence of genital infection with *Chlamydia trachomatis* and other STDs in his patient population. More recently, Carne and Dockerty² have confirmed the traditional view that screening is mandatory. Neither paper, however, distinguishes between patients whose sole symptom was genital warts and patients with additional genital symptoms which warrant screening for genital infection on their own account. This latter group might be anticipated to have a high rate of coinfection.

During the period April to September 1989, first presentations of genital warts were seen in 297 women and 249 men attending this genitourinary medicine department. All

were screened for *Neisseria gonorrhoeae*, *Chlamydia trachomatis* (by culture in men, ELISA in women), urethritis, *Candida albicans*, *Trichomonas vaginalis* and bacterial vaginosis using standard techniques. Of these patients, 138 (46%) women and 52 (21%) men had coincidental genital symptoms necessitating full genital screening. Of the 356 patients whose sole symptom was genital warts, 69 (33/159, 21% women (F) and 36/197, 18% men (M)) were found to have asymptomatic coinfection with a sexually transmitted disease, comprising gonorrhoea (1M, 5F), chlamydia (10M, 19F), non-gonococcal urethritis (22M), trichomoniasis (9F) and genital herpes (3M). Our finding of asymptomatic coinfection with a STD in one fifth of patients whose sole symptom was genital warts confirms the importance of screening for coinfection.

Genital infection with *Chlamydia trachomatis* or *Neisseria gonorrhoeae* are infections of significant morbidity, particularly in women and every opportunity for screening the multipartner sexually active population should be encouraged. Rather than reduce screening of patients with genital warts as advocated by Griffiths we would welcome an expansion of screening for asymptomatic genital infection in gynaecology, general practice and family planning settings, a secondary preventative measure constrained by resources and professional resistance.

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Genital infections due to *Neisseria meningitidis*

SIR,—In a recent report Wilson *et al*¹ drew attention to a case of urethritis in a heterosexual male caused by *Neisseria meningitidis* probably acquired by

oro-genital contact. They also noted three other reports of similar cases. We have observed several cases of *N meningitidis* in heterosexual patients in which there was no history of oro-genital contact.

Case 1: A male, 24 years old, complained of purulent discharge and dysuria. A Gram stained smear of the urethral exudate revealed pus cells containing Gram negative intra-cellular diplococci, of *Neisseria* morphology. Culture of the exudate on Thayer-Martin medium, incubated under microaerophilic conditions produced oxidase positive colonies of gram negative diplococci which fermented glucose and maltose. The isolate was highly sensitive to penicillin, amoxycillin, spectinomycin, cephalixin and erythromycin. No evidence of other sexually transmitted infections were obtained, and serological tests for syphilis were negative.

Case 2: A female, 19 years old, contact of a patient who had been previously diagnosed as having a sexually transmitted disease, but not due to *N meningitidis* had a frothy vaginal discharge and pediculosis pubis. Gram stained smears of urethral smear and cervical swabs revealed pus cells containing gram negative intra-cellular diplococci and a mixed flora of extracellular organisms. An oxidase positive Gram negative diplococcus, fermenting glucose and maltose and highly sensitive to penicillin, amoxycillin, spectinomycin, cephalixin and erythromycin was cultured from the exudate on Thayer-Martin medium. *Gardnerella vaginalis* and *Bacteroides* species were also isolated from the cervical swab. Serological tests for syphilis were negative.

Case 3: A female, 54 years old, a contact of case number 4, had a purulent vaginal discharge. A Gram stained smear of the urethral and cervical material demonstrated the evidence of pus cells containing gram negative diplococci. Oxidase positive colonies of diplococci fermenting glucose and maltose and sensitive to penicillin, amoxycillin, spectinomycin, cephalixin and erythromycin were cultured on Thayer-Martin medium. Syphilis serology was positive. However, the patient, who was of West Indian origin, had clinical evidence of previous yaws.

Case 4: A male, 58 year old husband of case 3, presented with a urethral dis-

charge and testicular pain. On examination, a profuse purulent urethral discharge was present, with no other genital abnormality noted. A Gram stained smear of exudate revealed pus cells containing gram negative diplococci, some intra-cellular. Serology was positive; however, like his wife, there was clinical evidence of a past yaws infection.

Following these cases we examined 300 patients taken at random (male and female) for genital and oral (throat swabs) carriage of *N meningitidis*. No isolates were obtained from genital sites although 47 isolates, approximately 15% of patients, gave positive cultures from throat swabs. These represented a range of serogroups, A, B, C, W135 and non-groupable, with group B predominating.

In the cases discussed the patients denied oro-genital contact, and the married couple (cases 3 and 4) also denied extramarital sex. It is therefore probable that the infection was transmitted by penile-vaginal intercourse.

It was not possible to carry out further tests to confirm the identity of isolates as *N meningitidis*. Occasionally maltose fermenting colonies of *N gonorrhoeae* and maltose negative strains of *N meningitidis* have been reported. These were usually associated with plasmid carriage and penicillin resistance.^{2,4} In most cases presented, the antibiotic sensitivity patterns were typical of most isolates of *N meningitidis* found in this country. The infections responded both clinically and microbiologically to the standard treatment regimen of ampicillin 3 g and probenecid 1 g. The high sensitivity to penicillin suggested plasmid carriage was unlikely although this was not examined directly.

These cases were unusual, in that *N meningitidis* produced a clinical picture indistinguishable from that of a gonococcal infection. Furthermore, the case histories strongly suggested that the infections were transmitted by penile-vaginal intercourse rather than by the oro-genital route. The original source of the infection is particularly obscure in the case of the married couple, since neither admitted any extra-marital relationships.

The failure to isolate *N meningitidis* from genital sites in over 300 patients attending our Genitourinary Medicine clinic, even though about 15% of these were carrying the organism in the throat suggested that genital infection

is not readily established by this organism. Clearly some additional factor must have predisposed for genital infection in our cases as in the others cited in the literature. The nature of this factor is unknown.

We are grateful to Dr P R Mortimer, Director, and Mr G Ackland, MLSO 3, Coventry PHL and Mr M A Bowness, MLSO 3, Rugby Pathology Laboratory for their help in this study.

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Genital herpes diagnosed by cervical cytology

A recent letter in this journal expresses the continuing concern of doctors about neonatal herpes.¹ Careful research will establish the risk, if any, to a neonate born to a mother with a history of herpes, and will clarify the management of these pregnancies.

Genitourinary physicians regularly deal with newborn babies with gonococcal or chlamydial infections. They note the increasing number of cases of HIV infection in babies,² and the re-emergence of congenital syphilis in the USA as a major public health problem.³ Against this background it could be argued that the ill-defined problems of herpes have been given disproportionate attention in the medical press.