## Correspondence

TO THE EDITOR, British Journal of Venereal Diseases

### Which Neisseria?

Sir.

I have read the paper by Willcox et al. (1977) with great interest. Their conclusions are confirmed by my own results of an investigation carried out on patients attending our clinic for venereal diseases during the years 1974 and 1975 (Table).

Of 357 patients with positive tonsillar cultures for Neisseria meningitidis, 208 (58·3%) had positive genital cultures for Neisseria gonorrhoeae. Of 2055 patients with negative tonsillar cultures for N. meningitidis, 745 (36·3%) had positive genital cultures for N. gonorrhoeae. This difference is highly significant.

In conclusion, N. meningitidis was isolated 2.5 times more frequently from

patients with genital gonorrhoea than from patients without, despite the fact that not only patients with recent orogenital contact had been included in our study. Genital N. gonorrhoeae was isolated almost twice as frequently from patients with tonsillar N. meningitidis than from patients without. I think, therefore, that these results from consecutive, unselected patients may be of interest.

### Yours faithfully,

Th. Rufli

University Skin Clinic, Kantonsspital, CH 4031 Basel, Switzerland.

#### References

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Which Neisseria? British Journal of Venereal Diseases, 53, 394-397.

Table Results of tonsillar and genital cultures in 2412 patients

Genital cultures			Tonsillar cultures (positive)					
	Total		N. gonorrhoeae		N. meningitidis		Other Neisseria	
	Men	Women	Men	Women	Men	Women	Men	Women
Neisseria gonorrhoed	ie							
Positive	754	199	16	6	164 (21·7%)	44 (22·1%)	40	10
Negative	1002	457	3	4	112 (11·2%)	37	24	13
Total	1756	656	19	10	276	81		

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# Hepatitis B surface antigen in homosexuals

Sir.

Since the observation of Vahrman (1970) that hepatitis B in promiscuous homosexual men might be sexually transmitted work by others in London and New York has confirmed the original impression. However, those cities are metropolitan centres attracting homosexual men who for a variety of reasons find it easier to live in their locales, and it may be argued that the results from such centres may not be similar to those found in provincial cities. It was, therefore, decided to examine for hepatitis B surface antigen (HBsAg) all male homosexual and bisexual patients attending

the department of genitourinary medicine at the General Infirmary, Leeds, between June 1975 and December 1977. All sera were tested for HBsAg by immuno-electro-osmophoresis and turkey erythrocyte haemagglutination (Hepatest); in addition, a few samples were tested by radio immunoassay.

Sera were obtained from 359 patients (mean age 31, age range 14-72 years). Inquiries showed that 316 patients were unmarried (eight stated that they were bisexual), 24 were married, 18 were separated or divorced, and one widowed. Of the 359 patients, sexually transmitted disease (STD) was present in 247 (68.8%) and a past history of STD was obtained from 186 (51.8%). The place of birth of 346 patients was the British Isles, of 10 Western Europe, of two Jamaica, and of one Thailand.

HBsAg was present in the serum of 12 (3.3%) unmarried patients—one born in Thailand and 11 in the British Isleswhose mean age was 25.7 years (age range 18-33 years). STD was present in 10 of these and eight gave a past history of STD. No history of jaundice, liver disease, or drug or alcohol abuse was obtained from eight patients; of the remaining four, one had suffered from jaundice a year previously, one was stated to have had infectious hepatitis a month earlier, one was suffering from infectious hepatitis at the time of examination, and one had been in contact with a man said to have had jaundice three months previously.

These results support previous findings on the high incidence of hepatitis B infection in homosexuals and suggest that the incidence in a provincial city is comparable with that of a large metropolitan area.

M. A. Waugh
Department of Genitourinary Medicine,
General Infirmary,
Leeds, LS1 3EX

M. H. Hambling Department of Virology,

Public Health Laboratory, Bridle Path, York Road, Leeds, LS15 7TR

References

Vahrman, J. (1970). Letter: Transmission of hepatitis. Lancet, 2, 774.

TO THE EDITOR, British Journal of Venereal Diseases

### Cryosurgery of genital warts

Sir.

The number of patients seeking treatment for genital warts in departments of genitourinary medicine has increased gradually over the years. In 1976 21 959 (5.8%) of all patients seen in these departments had genital warts (Department of Health and Social Security, 1977). The multiplicity of methods of treatment used for genital warts emphasizes the limited effectiveness of any one of these. Cryosurgery has been used with some success as one of the destructive methods (Ostergard and Townsend, 1969; Ng et al., 1973; Ghosh, 1977), but it has not achieved widespread acceptance probably because of unsatisfactory early equipment and important differences in the techniques and the patients studied. A clinical trial was, therefore, set up to test the effectiveness of cryosurgery in the treatment of genital warts in men and women, with particular attention being paid to the technique and to patient acceptability.

Of 103 patients (69 men and 34 women) treated with cryosurgery 60 (39 men and 21 women) had been previously unsuccessfully treated with either podophyllin, electrocautery, or curettage, with a mean of 14·0 attendances.

Other diseases as well as genital warts were treated before or at the time of the patients first attendance for cryosurgery. Of the 103 patients treated, 31 were excluded from the study because they were unavailable for follow up, and one was excluded because of treatment failure.

Of the 71 patients studied, 49 (69%) were cured after three or less cryosurgical sessions-that is, two weeks' treatment for patients attending weekly (Table). However, 10 (50%) of the 20 patients who had anal warts (with or without genital warts) needed more than three sessions. In those patients with anogenital warts five men and two women with anorectal warts were treated using a proctoscope. In five (7%) patients the warts recurred after apparent cure, but the recurrences were minor and responded rapidly to further treatment. Non-specific balanoposthitis occurred in one man after treatment.

The method of treatment was acceptable to patients. Ninety-one (88.3%) of the 103 patients in the trial attended until treatment was completed, although 20 of these did not attend for follow up. Discomfort and pain from thawing were reduced to a minimum by not freezing excess normal tissue. Also staging of treatment was more comfortable for the patient, although it meant additional treatment sessions in some instances.

Thus with careful attention to technique cryosurgery can be used successfully to treat genital warts, and it is acceptable to patients. The most important aspects appear to be accurate freezing of affected tissue by using two freeze-thaw cycles and KY jelly (Johnson and Johnson Ltd) to ensure adequate contact between wart and cryoprobe. The use of the Key Med variable-size chisel-tipped cryoprobes is an additional refinement.

The great advantage of cryosurgery is that it can be used as often as required where warts are extensive and where new lesions appear in untreated sites: both

Table Mean number of attendances for cryosurgery before cure

		Mean number of attendances before cure				
Site of warts	No. of patients	With previous treatment and cryosurgery (41 patients)	With cryosurgery alone (30 patients)			
Men						
Penile	28	2.4	2·1			
Anal or anogenital	13	8.2	2.0			
Intrameatal	7	4.0	2.0			
Women						
Genital	16	2.2	2.5			
Anal or anogenital	7	4.2	4.3			
Total attendances		4.1	2.3			

of these are common problems in the management of genital warts. Furthermore, there is no scarring, and local anaesthetics, such as Anugesic cream (Warner), are only necessary with extensive vulval or anal warts. Cryosurgery was also effective in treating those warts which were difficult to manage by other methods such as, intrameatal, vaginal, cervical, anorectal, and vulval warts in pregnancy.

A further assessment of the value of cryosurgery as a primary treatment for genital warts by a comparative trial with other methods, such as podophyllin, is envisaged.

I am very grateful to Key Med (Key Med House, Stock Road, Southend-on-Sea) for the loan of the Key Med MT600 cryosurgical equipment. I also thank the consultant staff of the department for allowing me to study patients under their care and all the staff who helped to organise the appointment clinic.

Yours faithfully,

M. J. Balsdon

Royal South Hants Hospital, Bullar Street, Southampton

### References

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TO THE EDITOR, British Journal of Venereal Diseases

# Comparison of three- and six-day clotrimazole treatment for vaginal candidosis

Sir,

In view of the popularly held belief that patients comply better with short rather than long courses of treatment, and since Masterton *et al.* (1977) reported good results in candidal vaginitis using a three-day course of clotrimazole, we decided to carry out a short study to compare the efficacy of a three-day course of clotrimazole (Canesten) pessaries (two inserted at night) with that of a six-day course (one inserted at night).

Forty-seven patients were included in the trial and were assessed four weeks after starting treatment. The initial diagnosis of candidosis was based on microscopical examination, but follow-up assessment included microscopy and culture (Sabouraud's medium).

The results are given in the Table. The success rates for three- and six-day courses of clotrimazole were not statistically significantly different ( $\chi_1^2 = 1.35$ , and P = < 0.25).

Recently it has been stressed that the success of any course of treatment depends on good patient compliance (Macnair et al., 1978). As the default rate was low and very similar for both the three- and six-day courses of treatment, it can be concluded that there was no significant difference in compliance between the two groups of patients.

Moreover, the results show that there is no therapeutic advantage in giving a less concentrated course (one pessary nightly for six nights) over giving the shorter or more concentrated three-day course. Nevertheless, Hurley (1975) advocates longer courses as a prophylactic