

other bacterial parasites of the genital tract,⁹ make them promising candidates for treating gonorrhoea.

Yours faithfully,
M C Lozano,
J C Palomares,
R Prados,
E J Perea

Department of Microbiology,
University of Seville Medical School,
Apdo 914, Seville-41009, Spain

References

1. Aznar J, Caballero MC, Lozano MC, De Miguel C, Palomares JC, Perea EJ. Activities of new quinoline derivatives against genital pathogens. *Antimicrob Agents Chemother* 1985;27:76-8.
2. Aznar J, Prados R, Rodriguez-Pichardo A, Hernandez I, De Miguel C, Perea EJ. Comparative clinical efficacy of two different single-dose treatments of ciprofloxacin for uncomplicated gonorrhoea. *Sex Transm Dis* 1986;13:169-71.
3. Bae BH, Ledesma G, Korzis J. Analysis of *Neisseria gonorrhoeae* for *in situ* β -lactamase production by reagent-impregnated filter paper replica methods. *J Clin Microbiol* 1983;19:545-7.
4. Meheus A, Piot P, Pattyns S. Activity *in vitro* of ten antimicrobial agents against *Neisseria gonorrhoeae*. A study of the correlation between the sensitivities. *British Journal of Venereal Diseases* 1976;52:332-6.
5. Boppana VK, Swanson BN. Determination of norfloxacin, a new nalidixic acid analog, in human serum and urine by high performance

liquid chromatography. *Antimicrob Agents Chemother* 1982;21:808-10.

6. Calubiran OV, Crisologo-Vizconde LB, Tupasi TE, Torres CA, Limson BM. Treatment of uncomplicated gonorrhoea in women: comparison of rosoxacin and spectinomycin. *British Journal of Venereal Diseases* 1982;58:231-5.
7. Centers for Diseases Control. Penicillin-resistant *Neisseria gonorrhoeae*. *MMWR* 1983;32:273-5.
8. Crump B, Wise R, Dent J. Pharmacokinetics and tissue penetration of ciprofloxacin. *Antimicrob Agents Chemother* 1983;24:784-6.
9. Hall MW, Opfer BJ. Influence of inoculum size on comparative susceptibilities of penicillinase-positive and -negative *Neisseria gonorrhoeae* to 31 antimicrobial agents. *Antimicrob Agents Chemother* 1984;26:192-5.

TO THE EDITOR, *Genitourinary Medicine*

Anal warts in heterosexual men

Sir,
Previous reports have suggested that many men who have anal warts practise anal receptive intercourse.^{1,2} We suggest that if men who have not engaged in that practice are examined, anal warts are more common than is supposed.

In a three month period in 1986 we studied 60 consecutive men with penile warts of less than one month's apparent duration. A full sexual history, particularly of anal receptive intercourse, was taken. On clinical examination we noted not only penile warts, but also

oral and anal ones. If anal warts were seen, proctoscopy was performed. Signs of other sexually transmitted diseases (STDs) were noted. Appropriate microscopical, microbiological, and serological tests were made for concomitant STDs.

Of the 60 men with penile warts (mean age 23, range 17 to 20), one was homosexual and 24 (40%) had recently engaged in orogenital sexual practices. The table shows the parts of the penis where condylomata acuminata were found. Many men had warts at more than one site.

TABLE Incidence of genital warts at different penile sites

Parts of penis	No of patients
Prepuce	30
Fraenum	15
Shaft	13
Meatus	11
Corona	8
Crural fold	8

Anal warts were found in 18 (30%) men, and in four the rectal canal (above the dentate line) was affected. Oral warts were found in three men. Concomitant STDs were found in 20 (33%) patients, the most common being non-gonococcal urethritis, which was found in 13 (22%).

This study confirms previous reports of the high incidence of STDs concomitantly with genital warts.³ It shows that when a man presents with penile warts, whatever his sexual orientation or history, his anus and mouth should be examined to exclude wart infection at these sites at the same time.

We conclude that anal warts do not necessarily point to homosexual experience. In a provincial centre anal warts are more common in heterosexual than homosexual men.

Yours faithfully,
B P Goorney
M A Waugh
J Clarke

Department of Genitourinary Medicine,
General Infirmary, Leeds LS1 3EX

References

1. Oriel JD. Anal warts and anal coitus. *British Journal of Venereal Diseases* 1971;47:373-6.
2. Carr G, William DC. Anal warts in a population of gay men in New York City. *Sex Transm Dis* 1977;4:56-7.
3. Kinghorn GR. Genital warts: incidence of associated genital infections. *Br J Dermatol* 1978;99:405-9.

TABLE Minimum inhibitory concentration (MIC) (mg/l) of 14 antimicrobials against 25 penicillinase producing *Neisseria gonorrhoeae* (PPNG) and 50 non-PPNG isolates from Spain

	Non-PPNG strains		PPNG strains	
	MIC ₅₀	MIC ₉₀	MIC ₅₀	MIC ₉₀
Penicillin	0.025	0.1	3.2	12.8
Ampicillin	0.05	0.2	6.4	12.8
Cefuroxime	0.025	0.025	0.025	0.05
Cefonicid	0.05	0.4	0.05	0.4
Ceftriaxone	0.0125	0.0125	0.0125	0.0125
Erythromycin	0.05	0.2	0.025	0.2
RU-28965	0.1	0.2	0.1	0.8
Rosoxacin	0.025	0.2	0.0125	0.5
Ofloxacin	0.025	0.05	0.025	0.05
Norfloxacin	0.025	0.1	0.025	0.01
Enoxacin	0.05	1.6	0.05	0.04
Ciprofloxacin	0.0125	0.0125	0.0125	0.0125
Spectinomycin	6.4	12.8	3.2	6.4
Tetracycline	0.8	1.6	0.8	1.6