Correspondence

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TO THE EDITOR *Genitourinary Medicine*

Cefuroxime axetil to treat gonorrhoea

Sir,

Intramuscular cefuroxime 1.5 g is an effective treatment for uncomplicated urogenital infection by penicillinase producing strains of *Neisseria gonorrhoeae* (PPNG) or non-PPNG strains.¹ Cefuroxime axetil is an ester of cefuroxime, which is well absorbed after oral administration. Oral cefuroxime axetil 1.5 g plus probenecid 1.0 g has been reported to give good results in treating urogenital and rectal gonorrhoea in men and women.^{2,3} Cefuroxime axetil 1.0 g alone has also been reported as effective treatment for uncomplicated gonorrhoea in men and women.^{4,5} We have recently compared cefuroxime axetil alone with ampicillin plus probenecid for treating uncomplicated gonococcal infections in men and women.

Patients with acute gonococcal infections were randomised in a ratio of 2:1 to receive either a single dose of 1 g cefuroxime axetil or 3 g ampicillin and 1 g probenecid. Clinical and bacteriological assessment was performed before (day 0) and a week after (day 7) treatment. Table 1 summarises the results for 81 patients who were bacteriologically assessable; 44 men and 10 women treated with cefuroxime axetil, and 22 men and five women treated with ampicillin and probenecid. The age distribution was similar in all groups. Post-gonococcal urethritis developed in 16/41 (39%) men treated with cefuroxime axetil and in 8/21 (38%) men treated with ampicillin and probenecid. No

patients with pharyngeal infections were allocated to treatment with ampicillin and probenecid. Of four patients with gonorrhoea caused by PPNG strains, all were randomised to receive cefuroxime axetil, and all were cured. Adverse events of a mild and transient nature were experienced by 4/54 (7%) patients taking cefuroxime axetil and by 2/27 (7%) patients taking ampicillin and probenecid.

A total of 92 isolates of *N. gonorrhoeae* from one or more of the following sites: urethra, cervix, pharynx, or rectum, were available for assessment of in vitro susceptibility to penicillin and cefuroxime. The activity of cefuroxime against these organisms was measured using an agar incorporation technique in Mueller-Hinton agar supplemented with saponin lysed horse blood to a final concentration of 10% v/v. The inoculum used was about 10⁵ colony forming units of each isolate, which was delivered to the surface of the agar plate using a multi-point inoculator. All isolates except three PPNG strains were inhibited by 2 mg/l or less of penicillin. All strains, including the PPNG strains, were inhibited by 1 mg/l or less of cefuroxime. The results are shown in table 2. Cefuroxime has been shown to have no useful activity against *Chlamydia trachomatis*.⁶

We conclude that cefuroxime axetil without probenecid appears to be a safe and effective alternative to ampicillin and probenecid for treating uncomplicated urethral and cervical gonococcal infection and may be of particular value in localities where penicillin resistant strains of *N. gonorrhoeae* are common. More experience of the treatment of rectal and pharyngeal infections is required.

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Yours faithfully,

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Table 1 Sites yielding *Neisseria gonorrhoeae* in 81 patients at presentation and a week after treatment with cefuroxime axetil or ampicillin and probenecid

	Cefuroxime axetil		Ampicillin and probenecid	
	Day 0	Day 7	Day 0	Day 7
Urethra:				
Men	41	2	21	1
Women	7	0	3	0
Rectum:				
Men	3	0	3	0
Women	4	0	1	0
Pharynx:				
Men	1	1	3	2
Women	1	0	0	0
Cervix	10	1	4	0

Table 2 In vitro susceptibility of 92 isolates of *Neisseria gonorrhoeae* to penicillin and cefuroxime

Antibiotic	No with minimum inhibitory concentrations (mg/l) of:										
	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	32
Penicillin	0	11	14	31	19	9	3	2	0	0	3*
Cefuroxime	0	19	18	26	19	5	5	0	0	0	0

*β lactamase producing strains.