

in ten, and one in three, respectively. In October 792 prescription forms were studied (1201 prescription items), in January 255 (413), and in March 616 (979).

In the three individual months 1663 prescriptions were examined (2593 prescription items): 344 (13.2%) of these items were for tranquillisers such as diazepam or tricyclic compounds such as imipramine, while 50 (2%) were for barbiturates either of the short-acting type or as contained in some antacid mixtures or so-called migraine remedies. The actual numbers of barbiturate prescription items in the tested sample were 20 in October, 5 in January, and 25 in March. Examination of the table shows that patients receiving anxiolytic treatment, antidepressive treatment, and sedative measures had their prescription items written more often than not by the receptionist.

Percentage of prescriptions written by receptionist

	October 1975	January 1976	March 1976
"Organic" prescriptions ..	23	22	22
Anxiety depression ..	66	60	65
Barbiturates ..	80	80	72

Discussion

Many factors must contribute to whether prescriptions are written by the general practitioner or the receptionist. The more a treatment is simply palliative and the less the doctor feels he has to contribute by frequent reassessment of the condition, the more likely it is that the patient will receive repeat prescriptions. For barbiturates this occurs in 72-80% of occasions. Around this central theme other factors such as excessive pressure of work and the cultural expectation of "a pill for everything" impinge. The treatment by most doctors and psychiatrists of patients with life difficulties by the single expedient of tablets encourages the population to regard physiological responses to stress as pathological processes.

The extraordinarily high percentage of receptionist-written prescription items (of psychoactive drugs) and its constancy from month to month possibly indicate a chronic failure of the medical profession to respond adequately to their patients' need of counselling, marriage guidance, and family therapy. In the short term it seems likely that many doctors require education in helping and persuading their patients to give up their dependence on tablets. These results conducted in one housing-estate community confirmed the clinical impression that patients obtain repeat prescriptions too easily.

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Infection with penicillinase-producing gonococcus

Gonococci that are relatively insensitive to penicillin have been recognised for many years. A few strains that are highly resistant owing to the production of penicillinase have recently been found in the USA.^{1,2} Phillips described a strain isolated in London,³ and Turner *et al*⁴ found several in Liverpool. We describe two further patients whose infections were due to a similar organism.

Effect of density of inoculum on MIC of penicillin in first isolate from case 2

Inoculum (20 µl)	Penicillin concentration (mg/l)								
	100	50	25	12.5	6.25	3.125	1.56	0.78	0
McFarland No 1	++	++	++	++	++	++	++	++	++
10 ⁻¹	-	+	+	+	++	++	++	++	++
10 ⁻²	-	-	-	-	-	-	50 colonies	++	++
10 ⁻³	-	-	-	-	-	-	-	+	+
10 ⁻⁴	-	-	-	-	-	-	-	12 colonies	30 colonies

++ = Confluent growth. + = Semiconfluent growth. - = No growth.

Case reports

Case 1—A 36-year-old man attended the Whitechapel clinic on 17 August 1976 complaining of urethral discharge for a day after recent sexual contacts in Liverpool. Gram-negative diplococci were seen in a stained smear, and he was given 1.5 g talampicillin and 2 g probenecid. Two days later his smear was still positive and he was re-treated with 3 g ampicillin and 2 g probenecid by mouth and 2.4 megaunits procaine penicillin intramuscularly. On 23 August gonococci were still present and further intercourse was denied. He was given 2 g kanamycin. When seen five days later he said that his discharge had stopped and then recurred; gonococci were still present, and 500 mg doxycycline was given. On 2 September he had no discharge, and smears and cultures were negative. He did not reattend.

Case 2—A 20-year-old girl came to the clinic on 28 August 1976 as a contact of the first patient, with whom she had had intercourse the previous day. She had no symptoms but gonococci were found in a cervical smear. Despite 3 g ampicillin and 2 g probenecid urethral and cervical smears still showed gonococci on 2 September. She was given 2.4 megaunits of procaine penicillin, but four days later gonococci were still present in the cervical smear. After further treatment with 2 g kanamycin smears and cultures were negative on 9 and 15 September.

Bacteriological studies—Gram-negative, oxidase-positive diplococci with the colonial morphology of gonococci were isolated three times in case 1 and twice in case 2. All these isolates produced acid from glucose but not from maltose, lactose, or sucrose. They gave bright fluorescence with an antigenococcal conjugate, and the coagglutination test result was positive.

Sensitivity tests—Plate dilution tests on brain-heart infusion agar with 10% horse blood were performed with inocula of about 10⁴ colony-forming units of three isolates from case 1 and two from case 2. All gave identical results. After 48 hours' incubation the minimum inhibitory concentrations (MICs) were: penicillin >0.5 mg/l, ampicillin >0.5 mg/l, streptomycin >500 mg/l, tetracycline 0.5 mg/l, and spectinomycin 10 mg/l. Strains from both patients were sensitive in disc tests to kanamycin and co-trimoxazole. Higher concentrations of penicillin were inoculated with 20 µl of tenfold dilutions of suspensions adjusted to the opacity of a McFarland No 1 tube. With strains from both patients the MIC varied with the size of the inoculum. Results with the first isolate from case 2 are shown in the table. Isolates of both strains produced a red coloration in the chromogenic cephalosporin test for beta-lactamase.⁵

Comment

The gonococci isolated from these patients were highly resistant to penicillin; results of in-vitro tests suggested that this was due to penicillinase production. Gonococcal sensitivity test results are seldom available before treatment failure is apparent, and the choice of antibiotic for re-treatment depends on knowledge of the sensitivity patterns of strains in local circulation. Whether these strains are freaks or are in general circulation remains to be determined. Fortunately they are still susceptible to other agents. Those so far tested have been sensitive to spectinomycin and tetracycline. Until more is known about their prevalence and properties, these two antibiotics seem likely to be effective when an initial treatment with penicillin has failed.

We thank Professor J D Williams for supplying chromogenic cephalosporin.

¹ Ashford, W A, Golash, R G, and Hemming, V G, *Lancet*, 1976, **2**, 657.

² Golash, R G, *et al*, *Lancet*, 1976, **2**, 793.

³ Phillips, I, *Lancet*, 1976, **2**, 256.

⁴ Turner, G C, Ratcliff, J G, and Anderson, D, *Lancet*, 1976, **2**, 793.

⁵ O'Callaghan, C H, *et al*, *Antimicrobial Agents and Chemotherapy*, 1972, **1**, 283.

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