

mens to the laboratory. In the test presented here dried specimens were eluted in 4 ml of sample buffer and yet only 200 μ l is used for *H pylori* antibody estimation. This gives the opportunity for the unused eluted portion to be used to measure other antibodies as the sample eluted can be kept for at least one week at 4°C without loss of activity (results not shown).

Whole blood dried on filter paper provides an ideal method of specimen collection for an expanding range of tests applicable to human health and disease. The stability and reproducibility of the results are comparable with those obtained with whole serum but without the inconvenience of that material.

This filter helper procedure can also be applied to other serological methods.

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Laboratory detection of ciprofloxacin resistant *Neisseria gonorrhoeae*

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Abstract

During 1989 and 1990 strains of *Neisseria gonorrhoeae* with reduced susceptibility to ciprofloxacin were isolated in laboratories across the United Kingdom. Treatment failures were associated with some of these infections. These strains were detected by quantitative susceptibility testing because the zone of inhibition around 5 μ g ciprofloxacin discs shows little decrease in size even with those that are the most resistant. This study determined that strains with reduced susceptibility to ciprofloxacin (MIC of ≥ 0.05 mg/l) produced no zone of inhibition around a commercially available disc containing 30 μ g of nalidixic acid. Ciprofloxacin sensitive (MIC of < 0.05 mg/l) strains, however, grew with a large zone (> 21 mm) around this disc. These observations suggest that laboratories could adopt this disc test to detect those strains for which ciprofloxacin is not appropriate treatment.

Ciprofloxacin has good in vitro activity against most strains of *Neisseria gonorrhoeae*¹⁻³ and consequently has been increasingly used as a first line treatment for gonorrhoea. Strains with decreased sensitivity (MIC of ≥ 0.05 mg/l), however, have been detected with increasing frequency in the past year and treatment failures with ciprofloxacin have been associated with some of these infections.^{4,5}

It would clearly be beneficial if these strains

could be detected by routine testing in all laboratories. Unfortunately, agar dilution quantitative sensitivities are labour intensive and are not usually practicable in a busy laboratory. At the Gonococcus Reference Unit (GRU), however, a simple qualitative test has been developed which seems to overcome this difficulty and could facilitate screening for these organisms.

Method and results

All gonococci received by the GRU are sensitivity tested by the agar dilution method to five antibiotics including ciprofloxacin. From these isolates representative ciprofloxacin sensitive strains, with a range of MICs, and all 25 strains with reduced sensitivity available to us (including isolates with ciprofloxacin MICs of up to 0.50 mg/l), were selected for this study. Their sensitivity was evaluated in a simple antibiotic disc test on heated blood agar using commercially available ciprofloxacin (5 μ g) and nalidixic acid (30 μ g) discs. After overnight incubation the diameters of the zones were measured using calipers.

All less sensitive strains show little decrease in zone of inhibition around the 5 μ g ciprofloxacin disc, even those with the highest MICs (fig 1). The data in fig 2, however, show that the zone of inhibition around the nalidixic acid disc was reduced to zero for strains with ciprofloxacin MICs greater than 0.025 mg/l, whereas a large (> 21 mm in diameter) inhibition zone around this disc was invariably present when sensitive strains (MIC of ≤ 0.025 mg/l) were tested.

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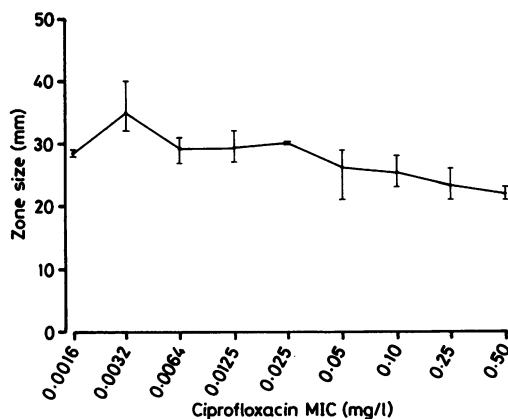


Figure 1 Inhibition zone size around a 5 µg ciprofloxacin disc for isolates with the indicated ciprofloxacin MIC. Bars indicate the range of zone size found and the line indicates the mean zone size.

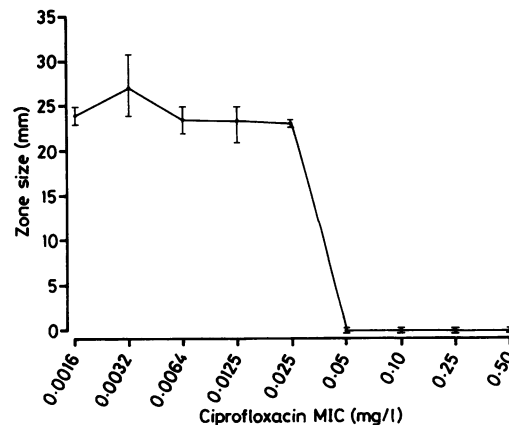


Figure 2 Inhibition zone size around a 30 µg nalidixic acid disc for isolates with the indicated ciprofloxacin MIC. Bars indicate the range of zone size found and the line indicates the mean zone size.

Discussion

We have shown that the 30 µg nalidixic acid disc can be used to provide a good screening test for ciprofloxacin resistance in *N gonorrhoeae*. The results suggest that laboratories which serve a genitourinary medicine clinic where ciprofloxacin is used could adopt this test to detect those strains for which this drug is not appropriate.

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Examination of spinal cord in diseases of the craniocervical junction and high cervical spine

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Abstract

A simple necropsy technique for the removal of the craniocervical junction was devised: a relatively small specimen comprising part of the clivus, the foramen magnum, and cervical vertebral canal is removed in one piece with the medulla and spinal cord inside, and examined systematically after fixation. This method, used in a series of patients with chronic craniocervical instability, allows both good clinicopathological correlations to be made and histological changes in the lower medulla or upper cervical cord segments to be related to sites of extrinsic compression.

Chronic medullospinal or high cervical cord compression produces brainstem symptoms and upper cervical myelopathy with long tract signs. Clinicopathological correlations are not often described, because it is relatively difficult to examine the craniocervical junction. Some pathologists remove the entire bony column with the spinal cord inside, but may not include the foramen magnum. This is also a time consuming procedure, creating problems in reconstruction for the mortuary technician. We performed necropsies on 15 patients with atlantoaxial and subaxial dislocation, 13 of whom had had transoral surgery for decompression of the cord, in almost

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