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Antibiotics and Respiratory Illness

Approximately 100 million prescriptions for penicillins, ampicillin, and tetracyclines were issued by general practitioners in England and Wales during the last three years for which figures are available.¹ A simple check in the average practice will show that two thirds of these are prescribed for new episodes of respiratory illness, and that children up to the age of 6 receive a quarter of the prescriptions though they represent only one in ten of the population. On average, then, every child receives one course of antibiotics per year during each of the first six years of life. Stated in this way the prescribing of antibiotics does not appear to be so great an issue as is often alleged, but the variations around this mean are considerable; and the problem facing the profession is whether to regard these variations as an educational challenge or as a stimulus to a fresh, research-based evaluation of prescribing indications in general practice.

Suggested criteria for antibiotic prescribing in respiratory illnesses are available in many textbooks.^{2,3} Rational therapy requires a diagnosis, and the difficulty of achieving this at the primary consultation has been accepted as being an important contributory cause of the general practitioner's therapeutic dilemma.^{4,5} Moreover, there is not an agreed, workable and objective clinical classification in this field of illness on which to base discussion, though the problem has recently been well reviewed.^{6,7}

Unfortunately, the pressures created by the environment in which the general practitioner works are too often less sympathetically discussed. Both the doctor and his patients—increasingly informed in the medical sense—correctly regard the virtual disappearance of quinsy and mastoiditis and the fall in child mortality from respiratory infection as direct benefits of the antibiotic era. Though the causes of the reduced incidence of rheumatic fever and glomerulonephritis are more complex, the decline of these diseases is often, also correctly, regarded as a further bonus of antibiotic prescription.

It would be naive to underestimate the public's enormous belief in the efficacy of antibiotics and the effect of this belief on the complex relationship between the general practitioner and his patient. When major illness develops or minor illness causes persisting inconvenience, the patient's faith in the doctor's clinical powers—so important a part of good family doctoring—may be put at risk quite unfairly by any suggestion of therapeutic inactivity on the doctor's part. The specialist often appears unaware of the extent to which he is protected by both his public image and the benefits of 24-hour observation of a captive patient in unfamiliar surroundings.

Fresh insight into general practitioners' present prescribing behaviour—a necessary preliminary to effecting any change in the status quo—has recently been provided by a Scottish study.⁸ Though the diagnostic labels used tended to obscure the issues, in fact there was an encouraging consistency between prescribing of antibiotics and the presenting features of illness at some four out of five consultations for respiratory problems. The study also brought into focus the smaller area of respiratory illness characterized mainly by minor degrees of throat inflammation where there seems to be disagreement on prescribing policy.

The logical extension of this work is the double-blind trial; and Gordon *et al.*⁹ have recently published such an evaluation. In a neat, if rather small, study of the effectiveness of various antibiotics against placebo in 89 children attending a hospital casualty department with minor respiratory illness they found no advantage in patients receiving active drug treatment, in either terms of relief of symptoms or resolution of physical signs. Though ethical considerations inevitably restricted the design of the study to less ill children, most patients were in the "red-throat" category. The study is of value in that it offers further encouragement for persuading doctors out of the tendency to over-prescribe antibiotics for this condition.

We all have something to learn. The general practitioner appears to prescribe too many antibiotics for patients best described as having "minor red-throat illness." The specialist, on the other hand, might reasonably be asked to quantify more accurately the risk-versus-benefit equation of antibiotic use. Those with extreme views on either side require to consider the extent to which treatment of illness and patient are inter-related. The general practitioner who submits too readily to extraneous pressures to prescribe antibiotics is creating a population of antibiotic-dependent patients with implications beyond the treatment of an individual illness. The hospital specialist who inflexibly disregards the realities of the outside world will find himself increasingly disregarded where he most wants to be of help.

¹ Committee on Safety of Medicines, unpublished information.

² *Price's Textbook of the Practice of Medicine*, 11th edn., ed. R. B. Scott. London, Oxford University Press, 1973.

³ Garrod, L. P., Lambert, H. P., and O'Grady, F., *Antibiotics and Chemotherapy*, 4th edn. Edinburgh and London, Churchill Livingstone, 1973.

⁴ Carré, I. J., *Practitioner*, 1970, 204, 55.

⁵ Lambert, H. P., *Journal of the Royal College of Physicians*, 1972, 6, 132.

⁶ Bridges-Webb, C., *Medical Journal of Australia*, 1968, 1, 915.

⁷ *Postgraduate Medical Journal*, 1973, 49, 577.

⁸ Howie, J. G. R., *Journal of the Royal College of General Practitioners*, 1973, 23, 895.

⁹ Gordon, M., Lovell, S., and Dugdale, A. E., *Medical Journal of Australia*, 1974, 1, 304.