

disease and in controls. In controls the positive reaction was limited to the lamina propria, while in Crohn's disease reactivity was also found in the submucosa and subserosa. Although the authors concluded that the results indicated that mycobacteria might have a role in the pathogenesis of Crohn's disease,⁸ a further search for mycobacteria in the affected intestinal tissue with antibodies to *M paratuberculosis* strain linda, *M tuberculosis*, and the common mycobacterial antigen lipoarabinomannan failed to find a positive reaction in any of 67 specimens from 30 affected patients.⁹

One case report has described a 38 year old homosexual man who developed fever, diarrhoea, and weight loss and in whom radiography showed terminal ileitis. Microbiological culture of the resected terminal ileum showed numerous *M avium intracellulare*. Antimycobacterial treatment had previously resulted in weight gain, loss of fever, and resolution of diarrhoea, implying that this patient's terminal ileitis was due to a mycobacterial infection.¹⁰ Clustering of Crohn's disease in several members of certain families supports the hypothesis of an infective cause.¹¹

Antituberculous treatment has been tried in Crohn's disease, although the drugs used have a low sensitivity to atypical mycobacteria including *M paratuberculosis*. Rifabutin and ethambutol in combination were assessed in 16 patients with recurrent Crohn's disease who had undergone an ileal resection with a partial colectomy and ileocolonic anastomosis. Ten patients were treated for six months; six patients withdrew because of adverse effects. In none of the 10 patients who completed the six months' trial and none of the five patients who completed 12 months' treatment was improvement of the lesions seen on endoscopy.¹² A pilot study at St George's Hospital in London has suggested that quadruple treatment with rifampicin, ethambutol, isoniazid, and pyrazinamide or clofazamine may be of value: 10 of 20 patients remained in remission after nine months' treatment. The authors concluded that controlled trials of antimycobacterial treatment, using four or more agents, should be conducted.¹³

Other theories of aetiology continue to be investigated. A group at the Royal Free Hospital in London has implicated a vasculitic process possibly initiated by the measles virus, since encoding mRNA has been found in affected tissue.^{14 15} Such agents could initiate an immunological process that becomes

self-perpetuating long after living organisms have disappeared.

Some cases of granulomatous terminal ileitis are caused by mycobacteria, albeit in immunocompromised people. The presence of antibodies to certain *M paratuberculosis* proteins in this condition and the finding, with sophisticated polymerase chain reaction techniques, of DNA associated with mycobacterium in the tissue of two thirds of patients with Crohn's disease argues for the involvement of mycobacteria in the pathogenesis of the disease. The failure to find organisms in affected tissue with sensitive immunohistochemical methods and the variable responses of the condition to antituberculous drugs suggest that a definite role for mycobacteria in the pathogenesis of Crohn's disease remains unproved.

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- 1 Crohn BB, Ginzburg K, Oppenheimer GD. Regional ileitis. A pathological and clinical entity. *JAMA* 1932;99:1323.
- 2 Gitnick G, Collins J, Beaman B, Brooks D, Arthur M, Imaeda T, et al. Preliminary report on isolation of mycobacteria from patients with Crohn's disease. *Dig Dis Sci* 1989;34:925-32.
- 3 Butcher PD, McFadden JJ, Hermon-Taylor J. Investigation of mycobacteria in Crohn's disease tissue by Southern blotting and DNA hybridisation with cloned mycobacterial genomic DNA probes from a Crohn's disease isolated mycobacteria. *Gut* 1988;29:1222-8.
- 4 Sanderson JD, Moss MT, Tizard ML, Hermon-Taylor J. Mycobacterium paratuberculosis DNA in Crohn's disease tissue. *Gut* 1992;33:890-6.
- 5 Yoshimura HH, Graham DY, Estes MK, Merkal RS. Investigation of association of mycobacteria with inflammatory bowel disease by nucleic acid hybridisation. *J Clin Microbiol* 1987;25:45-51.
- 6 Elsaghier A, Prantera C, Moreno C, Ivanyi J. Antibodies to Mycobacterium paratuberculosis-specific antigen in Crohn's disease. *Clin Exp Immunol* 1992;90:503-8.
- 7 Stainsby KJ, Lowes JR, Allan RN, Ibbotson JP. Antibodies to Mycobacterium paratuberculosis and nine species of environmental mycobacteria in Crohn's disease and control subjects. *Gut* 1993;34:371-4.
- 8 Kobayashi K, Blaser MJ, Brown WR. Immunohistochemical examination for mycobacteria in intestinal tissue from patients with Crohn's disease. *Gastroenterology* 1989;96:1009-15.
- 9 Blaauwgeers JL, Das PK, Slob AW, Houthoff HJ. Human gut wall reactivity to monoclonal antibodies against *M avium* glycolipid in relation to Crohn's disease (preliminary results). *Acta Leprol* 1989;7:138-40.
- 10 Schneebaum CV, Novick DM, Chabon AB, Strutytsky N, Yancovitz SR, Freund S. Terminal ileitis associated with Mycobacterium avium intracellular infection in a homosexual man with acquired immune deficiency syndrome. *Gastroenterology* 1987;92:1127-32.
- 11 Rutgeerts P, Geboes K, Vantrappen G, Van Isveldt J, Peeters M, Penninckx F, et al. Rifabutin and ethambutol do not help recurrent Crohn's disease in the neoterminal ileum. *J Clin Gastroenterol* 1992;15:24-8.
- 12 Hampson SJ, Parker MC, Saverymuttu SH, Joseph AE, McFadden JJ, Hermon-Taylor J. Quadruple antimycobacterial chemotherapy in Crohn's disease: results at 9 months of a pilot study in 20 patients. *Alimentary Pharmacology and Therapeutics* 1989;3:343-52.
- 13 Wakefield AJ, Sankey EA, Dillon AD, Sawyer AM, More L, Sun R, et al. Granulomatous vasculitis in Crohn's disease. *Gastroenterology* 1991;100:1279-87.
- 14 Wakefield AJ, Sim R, Cosby L, Dhillon AP, Isserte M, Taylor M, et al. Detection of measles virus genomic RNA in Crohn's disease by in situ hybridisation. *Gut* 1992;33:32.
- 15 Van Kruiningen HJ, Colombel JF, Cartun RW, Whitlock RH, Koopmans M, Kangro HO, et al. An in-depth study of Crohn's disease in two French families. *Gastroenterology* 1992;103:351-60.

Night visits in general practice

An acceleration, with the new contract, of an underlying rising trend

A steep rise in claims for night visits followed the introduction of the general practitioner contract in 1990 (p 762),¹ mostly resulting from the one hour extension to each end of the period of eligibility (2300-0700 hours). The underlying rising trend that existed before the introduction of the contract was, however, maintained. Deputising services undertook relatively fewer visits in 1990-1—at 28%, the proportion was down from 46% in 1989-90, the last year of the old contract. Although the overall number of night visits increased sharply in the first year after the introduction of the contract (for example, in Berkshire it rose by a half over the previous year (p 762)), the absolute number of night visits made by the deputising service may have altered much less, without much cost saving.

The extended hours of eligibility and the greater rewards for general practitioners who make their own night visits

readily explain these changes in activity. Whether the proportion of night calls dealt with by telephone advice fell as a result of the greater financial incentive to visit is unknown.

Why there is an underlying rising trend in night visiting, especially when average list sizes have fallen steadily,² is less easily explained. In part, it reflects the secular increase in overall consultation rates³ due to sociodemographic changes such as the increase in numbers and proportions of elderly people and the very young.⁴ Rates of out of hours calls for these age groups, as for general practitioner consultation rates in general, are higher, and relatively more calls from elderly patients result in home visits.⁵ Also, the proportion of households containing one person living alone increased between 1981 and 1991 from 22% to 26%, and the proportion of households containing only one adult and at least one child increased from 2% to 4%.⁴ In these often lonely circumstances

people's desire for medical advice may be acute, and with nearly nine tenths of households having a telephone in 1990 (up from three quarters in 1981),³ advice is becoming more accessible. The trend to early retirement may create expectations of good health, and greater unemployment is accompanied by increased levels of ill health. This may raise call rates, both generally and at night. Other new incentives to call have arisen, such as the prospect of meningococcal infection in a child with fever and headache—a fear more intense at night.

General practitioners' thresholds for visiting are probably lower for patients on lists that they cover than for their own patients. With the growth in the size of practices and better practice organisation the likelihood of general practitioners covering many other patients increases.⁶

With no disincentives for patients to request night visits and incentives for general practitioners to visit, can we expect the increased level of activity to yield health or welfare benefits or avoid costs elsewhere in the system? Some people believe that it helps in a night consultation to see a doctor you recognise. Taylor long ago argued that the advantages emerged over several years of contact and that in an emergency most experienced doctors could successfully manage their patient's problem.⁷ Others, especially those with an interest in the psychodynamics of the doctor-patient relationship, have argued that such situations present diagnostic opportunities fully exploitable only by doctors aware of their patients' relationships with those about them, and their previous behaviour and reactions.^{8,9} As for patients, most are satisfied by all aspects of emergency consultations with deputising service doctors, most of whom they do not know.¹⁰

Although there is evidence to the contrary,¹¹ another benefit attributed to general practitioners undertaking their own visits is that, through their familiarity with the situation, they are more selective in referring patients to hospital, and

hospital costs are therefore reduced.¹² It will be important to know whether the trend in nocturnal hospital admissions has changed since the new contract was introduced.

General practitioners are experiencing more stress, less job satisfaction, and poorer mental health with the new contract than before.¹³ The opportunity to enhance income through night visits may soften less agreeable effects of practice with the contract. Paradoxically, most general practitioners think that opting out of the responsibility for out of hours care altogether should be made possible.¹⁴

There has been an explosion of night visiting. Whether this has resulted in better clinical decision making, patient satisfaction, or use of resources is as yet unknown.

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- 1 Salisbury CJ. Visiting through the night. *BMJ* 1993;306:762-4.
- 2 Central Statistical Office. Health and personal social services. *Social Trends* 1993;23:109.
- 3 Office of Population Censuses and Surveys, Social Survey Division. *General household survey, 1990*. London: HMSO, 1992:60.
- 4 Office of Population Censuses and Surveys. *1991 Great Britain*. London: HMSO, 1992:12,13,19. (CEN 91. CM 56.)
- 5 McCarthy M, Bolland M. Telephone advice for out of hours calls in general practice. *Br J Gen Pract* 1990;40:19-21.
- 6 Baker D, Klein R. Explaining outputs of primary health care: population and practice factors. *BMJ* 1991;303:225-9.
- 7 Taylor S. *Good general practice*. London: Oxford University Press, 1954.
- 8 Clyne M. *Night calls. A study in general practice*. London: Tavistock, 1961.
- 9 Browne K, Freeling P. *The doctor-patient relationship*. London: Livingstone, 1967.
- 10 Dixon RA, Williams BT. Patient satisfaction with general practitioner deputising services. *BMJ* 1988;297:1519-22.
- 11 Williams BT, Dixon RA, Knowelden J. Emergency admission to hospital from a deputising service. A controlled study of duration of stay and outcome. *British Journal of Preventive and Social Medicine*. 1973;27:126-8.
- 12 Ministry of Health. Central Health Services Council, Standing Medical Advisory Committee. *Report of sub-committee on the field of work of the family doctor*. London: HMSO, 1963. (Gillie report.)
- 13 Sutherland VJ, Cooper CL. Job stress, satisfaction, and mental health among general practitioners before and after introduction of new contract. *BMJ* 1992;304:1545-8.
- 14 General Medical Services Committee. *Your choices for the future*. London: GMSC, 1992.

Role models and patronage

Greater awareness needed of their capacity for harm

In a more rational world some of the central processes of medical education and career development would be less mysterious—or at least more subject to rational scrutiny. No one who has gone through medical school would deny the influence of role models, and no one who has pursued a career in medicine, particularly hospital medicine, would discount the part played by patronage. Both are pervasive and powerful. Both are underdocumented.

Compared with other university courses, clinical medicine is distinguished by the contribution of teachers who are themselves practitioners of what they teach. As role models these teachers do more than they know, and they start early. Medical students in prolonged contact with junior doctors learn attitudes by example, for better or for worse. Though less in contact with students, the more senior and perhaps more influential members of the clinical teaching staff also offer a wide range of role models, which students may choose to emulate or reject. Although such little attention as has been paid to the role of the role model emphasises the positive, the sometimes dramatic impact and value of the negative should be recognised too. Students may choose quite early which behaviours to avoid for ever—or try to.

Teachers are probably more conscious of teaching know-

ledge and skills than they are of passing on attitudes, yet if, as former medical students themselves, they were to identify ideals in teaching the chances are that those ideals would be closely associated with one or two of their own teachers whose attitudes and behaviour made the most favourable impression at an impressionable age. We try to follow where such teachers led, but the accumulation of cynicism as students progress through the course is well recognised. Perhaps we teach what we are.

On an important topic where anecdotes far outnumber studies, a 1988 conference report from Indiana¹ at least provides a concise distillation of local—apparently anecdotally derived—wisdom, noting that role modelling is inseparable from teaching and may do harm as well as good. The report goes on to recommend that role modelling should itself be the subject of teaching so that its functions may become more explicit and better recognised. Even if we are not quite ready for that, we should as teachers at least attempt to promote our exemplar role to the realms of awareness and practise as conscious role models, because whether we like it or not that is how we function.

Patronage, by contrast, has always been a conscious activity. Defined as “the encouragement given to an individual