with rectal carcinoma of Dukes's stages B and C should receive adjuvant radiotherapy or radiotherapy and chemotherapy, convincing evidence from published randomised trials to support this view is lacking.

PETER BLISS

Western General Hospital, Edinburgh EH12 5BY

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EDITOR,—If local recurrence inevitably afflicted about a third of patients after apparently complete resection of rectal carcinoma, as R H J Begent has every reason to write, given some published reports, then the adjuvant radiotherapy and chemotherapy that he recommends for Dukes's stage B and C tumours would make sense.¹ This outcome, however, may well be avoidable.

I recently examined the sequel in each of the 212 patients with rectal carcinoma under my care during 1985-91 and found no evidence of such depressing failure. Altogether 135 patients had had curative major resections; 41 had palliative removal; and 12 had borderline palliative excision, in which an adjacent structure (usually the uterus or part of the bladder wall) was removed en bloc with the specimen. Of the remainder, 18 had transanal excision and six no procedure. Only one patient was lost to follow up.

None of the patients who had curative resection had adjuvant treatment and local recurrence developed in only three cases; this could be attributed to failure of technique in two cases and to erroneous management in one. None of the patients who had "en bloc" resections received adjuvant treatment either; one developed recurrence—unsurprisingly, since tumour invasion of both the uterus and excised vaginal wall was confirmed on histological examination. Most of the patients who had palliative resections received postoperative radiotherapy; eight developed local recurrence. Twenty two of these 41 patients, however, died within six months of surgery. Similarly, one of 91 patients who had curative resections of tumour of the rectosigmoid during the same period, and one of 11 who had palliative resections, developed local recurrence, though again half died within six months.

Clearly, much hinges on definition and comparing like with like when excluding palliative resections and recognising local recurrence. I define palliative resection of tumour as either cutting or fracturing the tumour off an adjacent irremovable structure, or leaving peritoneal deposits seeded transcoelomically, and local recurrence as the reappearance of tumour at the original site. With these definitions, and if the principles of resection of colorectal cancer are followed—namely, total mesorectal excision for rectal tumours, elimination of exfoliated cancer cells from the bowel lumen above the upper clamps and below the lower clamps before transection, and abdominoperineal excision of rectum when the tumour is too low or poorly differentiated for restorative resection—then my experience suggests that local recurrence will be so rare that adjuvant treatment is unnecessary.

W H F THOMSON

Gloucester Acute Unit, Gloucestershire Royal Hospital, Gloucester GL1 3NN

- 1 Begent RHJ. Colorectal cancer. *BMJ* 1992;305:246-9. (25 July.)

Americans retreat on SI units

EDITOR,—Magne Nylenna and Richard Smith criticise American doctors' retreat from using Système International (SI) units but do not strengthen their argument by comparing the introduction of a system of units with the global fight against serious disease.¹ The two problems are dissimilar, and it is unfair to make the comparison. Nylenna and Smith do not, however, explore why American readers prefer "conventional" units or mention the partial implementation of SI units in Britain.

Acceptance of SI units implies consistent use of both base units and derived units. Pressures should be expressed in pascals, temperatures in kelvin, and time in seconds. In practice we have a hybrid system of conventional units which often reflect the system used for analysis or measurement—for example, millimetres of mercury for blood pressure. Other compromises are made in expressing the amount of complex biological molecules in mass units rather than moles or as arbitrarily agreed units of biological activity.

If SI units are deemed more scientifically informative it is hard to imagine the day to day advantages in hospital wards of recording temperatures in kelvin, pressures in pascals, and time in seconds. Somewhere the importance of objectives has been overlooked. There seems little point in implementing a system that does not provide an advantage to either the provider or the recipient of health care.

There is no evidence that scientific thought is stifled when SI units are not used—indeed, most major advances in the pure sciences occurred without them. Perhaps the *New England Journal of Medicine* is still showing leadership qualities by provoking a debate on what we really want of our units in medicine.

J C TOWNSEND

Lewisham Hospital, London SE13 6LH

- 1 Nylenna M, Smith R. Americans retreat on SI units. *BMJ* 1992;305:268. (1 August.)

EDITOR,—If Magne Nylenna and Richard Smith's editorial is a plea for standardisation of units and nomenclature¹ then British journals have lessons to learn. Picking an issue of the *BMJ* (25 July 1992) at random shows several anomalies.

(1) Page 203, column 1, paragraph 3: l/m²/day—some use L as the abbreviation for litre to avoid confusion with the numeral 1. The superscript notation (l m² day⁻¹) is better for complex units. Indeed, some say that for Système International (SI) units the solidus should not be used for "per" at all.

(2) Page 203, column 2, paragraph 3: n-methyl-D-aspartate—should begin with N (for nitrogen) not n (for normal).

(3) Page 215, abstract: mm Hg—should be pascals in SI.

(4) Page 216, column 1, paragraph 5: mM—should be mmol l⁻¹ in SI.

(5) Page 216, column 1, paragraph 5: pH—should be nmol l⁻¹ hydrogen ion in SI.

If Nylenna and Smith's response to any of the above is that "this is better for our readers" then they should reread the editorial in the *New England Journal of Medicine* that they criticise so strongly and have some sympathy for the Americans' predicament.² We also question Nylenna and Smith's statement that "Britain... could introduce SI units everywhere after broad consensus was reached." SI units date from 1960, yet in current British legislation blood and breath ethanol concentrations are cited in mg and µg per 100 ml respectively. Indeed, the interface between clinical laboratory medicine and other disciplines such as pharmacology and toxicology was largely

neglected when SI molar units were introduced in clinical biochemistry.

With SI units (in essence an extension of the metre-kilogram-second system) it is the interpretation that causes all the fuss. There are inconsistencies—for example, one of the base units, the kilogram, is a multiple of the gram. Nevertheless, the framework has stood the test of time, although production of different versions of SI units by different bodies is a continuing source of confusion. Standardisation of SI units is one step. Adoption of molar units to the exclusion of mass units is another step. While doses of drugs, for example, are still measured in mass units it is logical to report plasma concentrations in SI mass units (mg l⁻¹, etc) rather than in moles.

The *BMJ* should lead by example not only in advocating SI units but also in ensuring that the associated conventions are applied sensibly and, if found wanting, are changed.

R J FLANAGAN

Poisons Unit, Guy's and Lewisham NHS Trust, London SE14 5ER

L F PRESCOTT

Clinical Pharmacology Unit, University Department of Medicine, Royal Infirmary, Edinburgh EH3 9YW

- 1 Nylenna M, Smith R. Americans retreat on SI units. *BMJ* 1992;305:268. (1 August.)
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Serotonin, gastric emptying, and dyspepsia

EDITOR,—Functional disorders have important economic and social consequences.¹ Thus A Chua and colleagues' observation of differences between selected dyspeptic subjects and controls in both solid phase gastric emptying and release of prolactin induced by buspirone is of great interest.² The interpretation of work on functional bowel disorders is confounded by arbitrary definition of cases³ and the high prevalence of symptoms in controls who do not present to a doctor.⁴ Explicit criteria for selecting cases and entry criteria are needed for both further research and extrapolation of findings to the clinic or general practice surgery. Unfortunately, Chua and colleagues give few data on the duration and severity of symptoms, or the incidence of other complaints. The proportion of dyspeptic subjects excluded by their complex organic screening process should have been given. There is also no indication of exactly how "formal psychiatric illness" was ruled out. Given the high prevalence of psychological dysfunction in such patients,⁴ these data are indispensable.

The response of prolactin to serotonergic agonists has been studied in patients with primary psychiatric disorders. Enhanced release has been found in disorders related to anxiety.⁵ This may also be relevant to work on those labelled as having the postviral fatigue syndrome.⁶ Similar neuroendocrine responses are seen in the premenstrual syndrome,⁷ the postviral fatigue syndrome,⁸ and anxiety disorders. Can changes in stomach motility therefore be attributed to the putative hypersensitivity to serotonin? Do all these conditions produce similar complaints or changes in motility? Moreover, the prolactin response in Chua and colleagues' cases overlaps considerably with that in the controls, from which over half seem indistinguishable; the remainder of the cases are dominated by one particularly high responder. This erodes confidence in the idea that the phenomenon explains symptoms.

Gastric emptying may have been delayed by increased sympathetic tone mediated by anxiety. Alternatively, prolonged loss of appetite due to the patients' symptoms may have resulted in decreased

gastric motility as observed in states of reduced dietary intake such as anorexia nervosa.⁸ Unfortunately, Chua and colleagues do not report dietary data or body mass indices.

All functional diseases must ultimately be explicable in terms of biochemical phenomena. Do patients benefit more, however, from the comfortable assertion that they have a "neuro-transmitter problem" and the pharmacological treatments that this inevitably suggests or by doctors addressing the psychosocial stressors that underlie or exacerbate the diseases? Evidence suggests that accepting a medicalising label and its attendant invalid role may be associated with delayed recovery in patients without demonstrable organic disease.⁹

MALCOLM H DUNCAN

Riverside Chemical Pathology,
Westminster Hospital,
London SW1P 2AP

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Provident associations and medical fees

EDITOR,—The provident associations seem to be trying to take on the mantle of employers and health providers with regard to fees, whereas they are merely insurance companies.^{1,2} Health providers are doctors, nurses, and hospitals, whereas the provident associations are finance providers. Medical fees are related to the complexity of treatment. Coding and costing various procedures obviously simplifies the companies' computer work but does not necessarily reflect the skill and professional work that may be required.

The associations suggest that it is the responsibility of each doctor to declare his or her likely charges before starting treatment, and I agree with this. I have given written estimates to patients for over 20 years, including my own fees, which are not necessarily related to reimbursement paid by insurers nor do they need to be.

It is the function of insurers to reimburse their customers up to the limit of their commercially agreed cover. So many scales of reimbursement exist that it is almost impossible for a patient to understand what will or will not be covered. It should therefore equally be the duty of the finance provider to define clearly what is not covered rather than what is.

With regard to overcharging, all the new published scales of fees are different and none makes any allowance for the expense and inconvenience of running a practice in central London. The official retail price index is 6.45% times higher now than it was in 1972, and inflation has averaged 9.7% a year (official figures, National Westminster Bank). Private medical insurance premiums in 1990 were 15.8 times higher than they were in 1970, but the fees suggested by British United Provident Association (BUPA) and Private Patients

Plan for surgeons and physicians are only 3-8 times higher than they were. Indeed, between 1977 and 1988 the benefits for surgical fees fell as a percentage of total health care costs.

It is not overcharging by doctors that resulted in BUPA making a £60 million loss last year but unrealistic underwriting, the acceptance of large group schemes without preconditions, and unfortunate and ill advised loss making ventures abroad. *Laing's Review of Private Health Care 1992* states: "It is widely recognised among insurers, however, that increased claims frequency is the main reason why PMI [private medical insurance] costs inflation ran ahead of RPI [retail price index] in 1990 and this trend has continued in 1991."

The provident associations must not, therefore, blame their mistakes on doctors and surgeons, whom they are attacking unfairly to make good their previous actuarial miscalculations. Medical fees are small compared with hospital costs, and if the insurance offered to the public is inadequate it is up to the associations to admit that they may have got it wrong and not to assume the mantle of an overbearing paymaster with the right to control salaries.

P K B DAVIS

London W1N 1DF

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Promoting sexual health

EDITOR,—In promoting sexual health it seems that, with regard to HIV, more openness to science is called for.¹ The so called safe sex approach to the spread of HIV rests on two doubtful premises. These are that reducing the risk by secondary prevention—using condoms—is possible and that primary prevention by encouraging abstinence in the young is impossible. Both these ideas are flawed.

The pregnancy rate associated with condom use is at least 15.7 pregnancies per 100 women years. The failure rate is higher still among young, unmarried women.² A woman can conceive on only one or two days each month, whereas HIV is transmissible 365 days a year. Slippage and breakage of condoms among homosexuals are common.³ In addition, HIV can pass through even the smallest gaps in condoms. Examination of latex gloves by scanning electron microscopy showed channels 5 µm in diameter penetrating the entire thickness of the glove.⁴

The incidence of female to male transmission of HIV during a single sexual exposure has been reported to be about 8%.⁵ A study of married couples in which one partner was infected with HIV found that 17% of the partners who used condoms for protection were positive for the virus within a year and a half (MA Fischl *et al*, third international conference on AIDS, 1987.) These facts have led many researchers to condemn use of condoms as a preventive measure (T Crenshaw, testimony before House subcommittee on health and the environment).⁶

The second false premise is the belief that abstinence in young unmarried people is impossible. Behavioural change in the young is possible, even for something as addictive as cigarette smoking.⁷ No AIDS prevention programme can work if the message it sends is mixed. Primary prevention through abstinence is possible when the message is clear and unequivocal.⁸

The fundamental strategy to control AIDS is primary prevention. Public health strategists endorse primary prevention in alcohol misuse and smoking. What prevents them from adopting the

same principles here? The safe sex crusade, backed by the Department of Health, is a threat to effective prevention of AIDS. The department's refusal to talk about the failure rate of condoms is irresponsible and may even be legally liable. Telling young people to reduce their risk to one in six is no better than advocating Russian roulette. Both are fatal eventually.

GREGORY T GARDNER

Alvechurch,
Birmingham B48 7EA

- 1 Smith R. Promoting sexual health. *BMJ* 1992;305:70-1. (11 July.)
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EDITOR,—John Kelly draws attention to the high failure rate of condoms even among those experienced in using them.¹ Our experience in a busy genitourinary clinic in London leads us to think that the high reported incidence of condom failure quoted may be misleading. We have found that many patients who acquire a sexually transmitted disease claim that the condom split or fell off, but on questioning partners it is apparent that one was never used. Patients believe that it is more acceptable to the doctor to claim that the condom failed than to confess that they did not use one, and this must be seen as a failure in our efforts to gain patients' trust.

Many of our patients are likely to have more than one partner. Therefore we need to address the issue of safer sex in a way that people will listen to. We are now setting up a self help group for women in our clinic to help them deal with issues such as negotiating safer sex, and we hope that this will increase use of condoms and reduce the risk of sexually transmitted diseases. An additional change of practice in our clinic is to provide black condoms as it was pointed out that these were more acceptable to some of our clients.

Safer sex may not be the whole answer to the problem, but any efforts to increase the use of condoms should be encouraged.

ADRIAN PALFREMAN
TINA SHARP
SUSAN THORNTON
FIONA BOAG

Department of Genitourinary Medicine,
Westminster Hospital,
London SW1P 2AP

- 1 Kelly J. Promoting sexual health. *BMJ* 1992;305:363. (8 August.)

London's health care

EDITOR,—The King's Fund report on health care in London over the next 18 years has provoked remarkably little comment in the medical press.^{1,2} This is surprising since it proposes radical changes in the scope of primary and community health care together with a swingeing reduction in the number of acute hospital beds, particularly in general medicine, and the closure of 11 acute hospital units to fund the expansion of primary and community