

only by introduction of oxygen into the gas mixture after the initial opening of the bowel by diathermy, after which continuation of diathermy serves to initiate the explosion, or by uptake of nitrous oxide (used in the anaesthesia) into the intestinal gas bubbles from the surrounding capillary network in the intestinal wall, because the high concentration of nitrous oxide in the blood during anaesthesia would enable a high concentration gradient towards the intestinal gas to be maintained.

The consequences of an increase in Paco_2 due to laparoscopy with carbon dioxide are simpler to deal with than the blast damage to internal organs caused by an explosion. Our critics at King's College Hospital have themselves recognised another potential hazard of nitrous oxide used in laparoscopy (1 March, p 511)—an unexpected rise in Paco_2 in two of their patients. The possible explanation (1 November, p 288) of this arterial hypercapnia needs further justification with some experimental evidence.

As little in the way of measurement has been done to assess the intermixing of nitrous oxide with intestinal gases, either during laparoscopy or during open abdominal procedures, we echo the sentiment expressed by Dr Corral and his colleagues for a study of this problem. In the meantime, would it not be wise to be cautious and avoid the potentially explosive and fatal hazard involved in using nitrous oxide?

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Thyrotoxic periodic paralysis in Britain

SIR,—We read with interest the case report by Dr K Ali (29 November, p 503). There have, however, been at least four previous reports of British patients with thyrotoxic periodic paralysis.¹⁻⁴ We should like to describe a further case.

The patient, a 22-year-old male student of Chinese extraction from Johore, Malaysia, was symptom-free when he came to the United Kingdom in 1973. In July 1974 he noted frequent attacks of leg pain and weakness, which were most severe when resting after exercise or in the late evening after a heavy meal. The patient regularly walked to the university, but after sitting through lectures he was unable to rise without assistance. In spite of visits to his general practitioner and the student health centre the correct diagnosis was not made for several months. By December 1974, when he was referred to the thyroid clinic at this hospital there was unequivocal clinical and biochemical evidence of hyperthyroidism (plasma thyroxine 331 nmol/l (26 $\mu\text{g}/100\text{ ml}$), plasma triiodothyronine 14.8 nmol/l (0.96 $\mu\text{g}/100\text{ ml}$) by radioimmunoassay).

Carbamazole and propranolol were prescribed, but because the patient developed a severe skin reaction carbamazole was discontinued and he was given a therapeutic dose of ^{131}I in January 1975. Within three weeks the painful paralytic attacks became less frequent; he became hypothyroid 10

weeks after treatment and thyroxine replacement was started. He is now clinically euthyroid on 125 μg thyroxine daily and remains free of paralysis.

Periodic paralysis is the rarest of the neuromuscular complications of hyperthyroidism. However, it has been shown to affect more than 10% of male Chinese thyrotoxic patients⁵; this is the first such patient to be described in Britain.

Although, as Dr Ali states, the pathophysiology of thyrotoxic periodic paralysis remains to be defined, an abnormality of carbohydrate metabolism may be responsible.⁶ Shishiba *et al*⁷ described a patient whose plasma immunoreactive insulin (IRI) level rose from 75 mU/l to 500 mU/l immediately before a paralytic attack. While thyrotoxic our patient, in response to high carbohydrate feeding,⁸ showed a similar rise in IRI to 582 mU/l. Currently we are analysing metabolic studies which were undertaken while the patient was hyperthyroid, when he was hypothyroid following ^{131}I therapy, and after he had become euthyroid on thyroxine replacement. Preliminary evaluation indicates that an abnormality in insulin metabolism existed in our patient and may have played a pathogenic role in his paralytic attacks.

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Medical recruitment

SIR,—There have been a number of references in your columns to the loss sustained to clinical medicine by the promotion of experienced ward sisters to administrative posts and the resulting lack of valuable support in decisions affecting the care of patients. There are other forms of expertise not confined to the graduates of medical schools, and room should be made for other branches of the profession working in the clinical field by the institution of a conversion course to medical graduation from among those who have proved their worth.

Apart from nurses there are scientists, senior technicians, and members of other supplementary professions who could provide a field of recruitment of exceptional value. Indeed, there are many examples now serving who have graduated in this way by their own initiative. This form of advancement is already available in other learned professions and widely recognised in the armed Forces.

Skill in administration is only one of many specialties and it is a waste of ability in other fields of equal importance to make it the only ladder towards professional advancement.

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A case for private practice?

SIR,—I read with great interest the commentary by Mr Rudolf Klein (6 December, p 591). He presents a perceptive but not an entirely accurate analysis of the reasons why patients may wish to seek private medical care. Medicine is based on confidence and it is a tremendous help if a patient knows that a certain surgeon or physician has looked after one of his friends and in addition that his own family doctor has confirmed that he is indeed a suitable consultant. It is perfectly reasonable for patients to wish to get the most appropriate consultant for their particular problem and the same would be equally true if they were seeking professional legal or architectural advice. I believe there are very few patients who seek to "buy time." There are a great many who wish to maintain control over the arrangements for their treatment. This is indeed essential for many who are concerned with small businesses. Contrary to general newspaper comments, queue-jumping based on the purse is relatively uncommon. At least nine out of 10 private patients would get more quickly into an NHS bed than into private accommodation. It is almost unknown for a patient with an acute emergency to get into a private room, as the general private beds are continuously occupied. For the patient with a non-urgent problem such as an inguinal hernia it is certainly true that quicker admission can be arranged privately than under the NHS. The private NHS sector serves a very useful purpose in providing flexibility in treatment for business reasons. The small private sector constitutes a most valuable safety valve for the NHS, and indeed is an important asset.

Mr Klein is the editor of a recent book, *Inflation and Priorities*, published by the Centre for Studies in Social Policy, to which he contributed a most interesting commentary on the background financial problems of the NHS.

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Junior staff ballot results

SIR,—I was interested to read the result of the junior staff ballot (22 November, p 482) and to see that Sir Robert Payne was entirely satisfied about the integrity of the staff involved in the mechanics of the operation. The *Concise Oxford Dictionary* defines "integrity" as "wholeness; soundness; uprightness; honesty." I regret that I am unable to accept the "soundness" of the figures presented.

Altogether 14 440 ballots were received and 227 defective ballots were rejected and excluded from the count, yet the answers to question 1 total 14 201 instead of the expected 14 213. If 12 respondents failed to answer question 1 they too should have been rejected since question 1 is the key question offering the possible alternatives of questions 2 or 3.

Question 2 was to be answered only by the 2192 "no" respondents to question 1, yet there are 3513 answers. Should not the scrutineers have correlated questions 1 and 2?

Question 3 should have been answered only by the 12 009 respondents replying to question 1 with a "yes," yet there are 12 691