

Points

Refeeding hypophosphataemia in anorexia nervosa and alcoholism

Dr ANTHONY WHITE (Glenside Hospital, Bristol BS16 1DD) writes: Dr Allan D Cumming and others (22 August, p 490) emphasise the risk of hypophosphataemia in anorexia nervosa and alcoholism. As part of a wider survey I recorded the phosphate results obtained in the management of 1007 consecutive acute adult psychiatric admissions with the full range of diagnoses. Of the 444 patients tested, 69 (16%) had results below the reference range of 0.7-1.5 mmol/l, the two lowest levels being 0.31 and 0.33 mmol/l. No psychiatric diagnosis occurred more often than expected by chance, and none had raised phosphate concentrations. Clearly these patients were not as ill as the two described by the authors or they would not, I hope, have remained in a psychiatric ward. Dietary neglect is regularly seen in patients admitted to psychiatric units with any florid mental illness, not only anorexia nervosa or alcoholism. Effective treatment usually brings rapid improvement in mental state and resumption of dietary intake. While hypophosphataemia is recognised in starvation and refeeding, the extent and danger had not previously been considered a threat to psychiatric management and the low concentrations in my survey had mostly passed unnoticed and unexplained. Dr Cumming and colleagues may be drawing attention to a dangerous unrecognised physical concomitant of otherwise satisfactory psychiatric treatment. The topic begs for prospective study.

The cost of unnecessary tests by day or night

Dr P M BRETLEND (Whittington Hospital, London N19 5NF) writes: Dr P M G Broughton's classification of costs into variable, semivariable, and fixed is to be commended because it is the key to a proper understanding of the economic use of resources (13 June, p 1503). He estimates that a laboratory test performed outside normal working hours costs about 50% more than one done during the day. I found at this hospital in 1984 that radiographical examinations performed outside normal working hours actually cost less than those performed during the working day¹ chiefly because the radiographer is paid on an item of service basis with only a small stand by fee. To take Dr Broughton's figure, a 16% reduction in such work would have saved only 3.5% of radiographers' salaries, 2.1% of the radiography budget, and 1.2% of the total costs of the imaging service. Moreover, the imaging service accounted for only 4% of the district's total expenditure on the hospital in that financial year. While these sums may be worth saving, they are much smaller than might have been expected in view of the reduction in work. We should therefore be wary of attempts to reduce, on grounds of cost alone, the provision of these clinically valuable emergency services. Unnecessary tests or radiography should never be performed anyway, but that is a different problem.

1 Bretland PM. Costing imaging procedures. *Br J Radiol* (in press).

Hypophosphataemia: a feature of malaria?

Dr J B ILANGARATNE (Department of Histopathology, Mayday Hospital, Thornton Heath, Surrey CR4 7YE) writes: I would like to suggest the following physiological mechanisms for the possible association between hypophosphataemia and malaria seen by Dr J M Lewis (15 August, p 416). The phosphate concentration in the intracellular compartment is about 100 times greater than that of extracellular fluid.¹ In the kidneys about 80% of the filtered phosphate is reabsorbed by active transport in the proximal tubule and tubular damage increases phosphate excretion, lowering plasma phosphate concentration until a new equilibrium is reached.² In malaria destruction of parasitised red cells is well

recognised, and in severe forms of falciparum malaria renal tubular damage may occur.³ Renal failure could occur in malaria in the absence of severe haemolysis,² and so transient tubular damage could occur (without severe haemolysis), leading to selective impairment of phosphate reabsorption by the renal tubules (mainly proximal), thus causing hypophosphataemia. This transient tubular damage could be secondary to a minor degree of intravascular haemolysis or due to numerous toxins which may have been released from ruptured schizonts. In Dr Lewis's study serum phosphate concentrations increased with recovery; this supports the earlier postulation. In view of the rapid recovery in phosphate concentrations an immune complex mechanism for this possible transient tubular damage may be excluded. In the acute stage of malaria food intake and retention may be minimal—six patients (out of 17) in Dr Lewis's study vomited—and during starvation body phosphate stores become depleted, but plasma phosphate values are usually only modestly depressed.⁴ Also plasma phosphate concentrations have a circadian rhythm.² Both these factors may contribute to hypophosphataemia in malaria. Until further studies are done (preferably with more patients) monitoring serum phosphate values in all patients with malaria is not indicated. Furthermore, in Third World countries routine measurement of phosphate concentrations will be an unaffordable luxury.

- 1 Knochel JP. The pathophysiology and clinical characteristics of severe hypophosphataemia. *Arch Intern Med* 1977;137:203-20.
- 2 Weatherall DJ, Ledingham JGG, Warrell DA. *Oxford textbook of medicine*. Vol 2. Oxford: Oxford University Press, 1983:18.10-1.
- 3 Anderson JR. *Muir's textbook of pathology*. 12th ed. London: Edward Arnold, 1985:28.5-6.
- 4 Cumming AD, Farquhar JR, Bouchier IAD. Refeeding hypophosphataemia in anorexia nervosa and alcoholism. *Br Med J* 1987;295:490-1.

Management tensions in laboratories

Mr L BUTLER (Good Hope General Hospital, West Midlands B75 7RR) writes: Management tension in laboratories may be less of a Talking Point than Professor Roger Dyson suggests (20 June, p 1626) because most laboratories function agreeably and reasonably efficiently. This reflects sensible attitudes of give and take, for the best run establishments do not flinch from using individual talents or expect that management skills are confined to a single staff group. I am puzzled by the claim that difficulties arising from relations between medical and medical laboratory scientific officers' structures have "dogged pathology laboratories for the last decade." I doubt that there are many laboratories that have been dogged in this way, and I have no first hand knowledge of any, although I can think of instances when difficulties have arisen from lack of agreement between medical staff. Perhaps one of the reasons for this is the absence of a hierarchical structure among consultants. If tension does exist it probably has more to do with Griffiths's restructuring than with problems within the laboratory. Griffiths was undoubtedly right in recognising that there was no one in absolute charge, but the general air of suspicion that continues to greet a philosophy aimed at producing credible chains of command may be more firmly rooted in insecurity than genuine disbelief. Successful management depends on sensible delegation of responsibility and accountability, and it is unlikely to flourish in an autocratic environment. No one would seriously challenge the directorial role of the consultant pathologist, but it is naive to expect that he or she will always have the training, experience, and interest to take on the additional tasks of manager, accountant, and supervisor. No harm need come to the clinical haematologist who declines to grasp every nut and bolt but chooses to rely on direction as the best way of promoting effective use of resources. Professor Dyson displays a good deal of awareness about cogwheel, clinical budgeting, and the like, but he seems to rely on the Royal College of Pathologists for the way forward. Those disciples who argue strongly in favour of the department rather than the laboratory as a whole must not only be prepared to

sacrifice the support of their erstwhile colleagues but also expect to become increasingly susceptible to the effects of divide and rule.

Does screening high risk dental patients for hepatitis B virus protect dentists?

Drs P-J LAMEY and L P SAMARANAYAKE (Glasgow Dental Hospital and School, Glasgow G2 3JZ) write: We were surprised by the conclusions of Dr Heather M Smith and colleagues (1 August, p 309) that screening patients to protect dentists was of questionable validity and that vaccination of all staff at risk should be encouraged. It was to investigate the uptake of hepatitis B vaccine among dental practitioners that we undertook our original studies,^{1,2} and subsequent reports have shown that some 80% of general dental practitioners in Britain have accepted vaccinations.³ The British Dental Association has been campaigning for vaccination of all dental staff at risk and recently distributed a free booklet on viral hazards in dentistry to all dentists in Britain.⁴ It seems astonishing that this paper relating to hepatitis and dental surgeons should not contain one recent reference on the subject or point out the policy of the British Dental Association.

- 1 Samaranyake LP, Lamey P-J, MacFarlane TW, Glass GWJ. Hepatitis B vaccine and the dental practitioner. *Br Med J* 1986;292:1050.
- 2 Mathews RW, Scully C, Dowell TB. Acceptance of hepatitis B vaccination by general dental practitioners in the United Kingdom. *Br Dent J* 1986;161:371-3.
- 3 Samaranyake LP, Scully C, Dowell TB, et al. New data on the acceptance of the hepatitis B vaccine by dental personnel in the United Kingdom. *Br Dent J* (in press).
- 4 British Dental Association. *Guide to blood borne viruses and the control of cross infection in dentistry*. London: British Dental Association, 1987.

Staying cool on child abuse

Dr RALPH A A R LAWRENCE (Leabrooks, Derby DE55 1LJ) writes: I give unqualified support to Professor Roy Meadow's contention that a proper general examination of the child in a case of suspected abuse is essential, and if signs of sexual abuse are found then the correct subsequent procedure must be followed (8 August, p 345). I found it surprising, however, that Professor Meadow did not mention the important part played by experienced and qualified police surgeons in diagnosing child sexual abuse and non-accidental injury. When I am required by the police to examine a child for sexual abuse or non-accidental injury I always do a complete physical examination before the genital examination. This gains the confidence of the child and makes the rest of the examination much easier. It is important that every agency concerned understands the part played by police surgeons and forensic physicians. Even some paediatricians seem to have mistaken ideas. In an article in *General Practitioner* community paediatrician Dr Jane Wynne stated that police surgeons worked mainly with teenage girls who made the complaint, whereas paediatricians were trying to detect sexual abuse in young children.¹ I can suspect only that Dr Wynne's contact with police surgeons is limited, as this is certainly untrue in my constabulary area and in the case of most members of the Association of Police Surgeons of Great Britain and Northern Ireland.

1 Anonymous. Check child's bottom in suspected abuse cases. *General Practitioner* 1987 Aug 7:32 (col 5-6).

Problems of comprehensive shared diabetes care

Drs M A WALKER and N W CARTER and Ms JILL SHEARER (University Computing Services, Ninewells Hospital and Medical School, Dundee DD1 9SY) write: Dr F M Sullivan (18 July, p 214) suggests that a structured framework for each clinic visit and a