

and recently Holmberg *et al* have reported developments which have improved the specificity of the tests.³ We tested our patient's serum by counterimmunoelectrophoresis using a pooled cytoplasmic extract from strains of *A israelii* kindly given to us by Dr Holmberg. Serological tests might be helpful for diagnosis as specimens are not easily collected for culture or histological examination in pelvic infections. The presence of a slow-growing anaerobe could easily be missed if there were a mixed growth of organisms on culture, and short courses of antibiotics might prevent cultural diagnosis. Serological testing of patients with long-standing pelvic inflammatory disease, particularly when associated with an IUCD, could be useful for detecting actinomycosis which might otherwise be missed. Circulating immune complexes were demonstrated in our case; we suggest that the disappearance of such complexes may be a useful marker for adequacy of treatment.

We wish to thank Mr A C Fraser for permission to publish details of his patient and Mr M Savage and Professor J Mowbray for performing the serological tests.

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- ¹ E Houang, personal communication.
² Communicable Disease Surveillance Centre of the Public Health Laboratory Service, *Communicable Disease Report*, 1978, No 5.
³ Holmberg, K, Nord, C E, and Wadstrom, T, *Infection and Immunity*, 1975, 12, 387 and 398.

Is pancreatic isotope scanning worth while?

SIR,—The short report by Dr Peter Cotton and his associates on isotope scanning of the pancreas (4 February, p 282) prompts us to record our recent results with this technique and explore some of the possible reasons why our experience differs.

We have previously published a study in 102 patients examined with a rectilinear scanner.¹ We now report the results in 200 patients examined by General Electric Radicamera with a Med II system. Scans were interpreted by three observers with experience of the technique but without knowledge of the precise clinical situation. The results are shown in the table below.

With experience and superior equipment the incidence of technically unsatisfactory scans is now negligible. However, compared with our previous study the false-positive rate is higher—36% compared with 30%—a trend which reflects an acknowledged bias towards reporting as abnormal a scan which is not unequivocally normal. Such a policy is of practical value when, as in this department, isotope scanning is used primarily as a screening test to select those patients who

require more detailed investigation for, in our experience and as others report, a normal scan virtually excludes chronic pancreatitis and cancer.¹⁻³

The high rate of "equivocal" reports, 20%, reported by Dr Cotton and his colleagues, may partly be conditioned by the apparatus used and influences the results in both normal and disease groups. Though we have no experience with the Elscint whole-body scanner, we abandoned the use of the Nuclear Enterprises gamma camera for pancreatic work after a few months' use in favour of the old rectilinear scanner, which provided more satisfactory imaging. We find it difficult to account for their low number of abnormal scans in patients with chronic pancreatitis and cancer (59%). Even if the equivocal reports are counted as abnormal the percentage rises only to 79. However, the results in relapsing pancreatitis are explicable since in relapsing acute pancreatitis the timing of the scan is all-important; total recovery of function can be anticipated within 6-8 weeks of the acute relapse. Dr Cotton and his colleagues do not distinguish between relapsing chronic and relapsing acute pancreatitis. The disadvantage of isotope scanning other than the high false-positive rate in subjects with a normal pancreas is that the scan cannot be repeated to follow functional progress in the individual patient within 4-6 months.

Finally, in our experience ultrasonography is not an ideal primary screening test since it depends even more than isotope scanning on the individual operator's technical expertise. In agreement with Doust and Pearce⁵ we have observed that in some 50% of patients with quiescent chronic pancreatitis the ultrasonic scan is normal. In these isotope scanning is abnormal in 96% of cases.

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- ¹ Braganza, J M, *et al*, *Gut*, 1973, 14, 383.
² Mitchell, C J, *et al*, *British Medical Journal*, 1976, 2, 1307.
³ Agnew, J E, Maze, M, and Mitchell, C J, *British Journal of Radiology*, 1976, 49, 979.
⁴ Russell, J G B, *et al*, *Gut*, 1977, 18, A418.
⁵ Doust, B, and Pearce, J, *Radiology*, 1976, 120, 653.

Coronary heart disease, age, and sex

SIR,—Drs R F Heller and H S Jacobs (25 February, p 472) suggest that testosterone may be responsible for the extra risk of coronary heart disease (CHD) that men before the age of 50 years encounter as compared with women of the same age; but "the mechanism of any risk it might produce is not clear."

More than 20 years ago I¹ discussed the possible relation of a relative deficiency of essential fatty acids (EFA) to atherosclerosis

and CHD and pointed out that as "the requirement of male animals for EFA is at least five times that of females," if we argued from lower animals to man "deficiency would be likely to be at least five times commoner in males than in females." The ratio of the male to female mortality rates for CHD (ICD 410-414) in England and Wales in 1973 was 6.1 at age 35-44 years and 5.5 at age 45 to 54 years. If the animal is castrated the requirement of the male is the same as that of the female.

Since prostaglandins are formed in the body only from EFA and since human males excrete roughly five times as much prostaglandin metabolites as do females² it might be supposed that the increased male requirement of EFA is caused by increased synthesis of prostaglandins. But this synthesis accounts for only a very small proportion of the daily requirement of EFA. For a reason that is obscure male animals become much more depleted than do females on a diet low in EFA.³

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- ¹ Sinclair, H M, *Lancet*, 1956, 1, 381.
² Samuelsson, B, *et al*, *Annals of the New York Academy of Sciences*, 1971, 180, 138.
³ Aftergood, L, and Alfin-Slater, R B, *Journal of Lipid Research*, 1965, 6, 287.

Diet and heart: the importance of metals

SIR,—In their very interesting prospective study on diet and the heart (19 November, p 1307) Professor J N Morris and his colleagues mention the possibility that their results might be accounted for by deficiencies in the diet of those with low energy intake. There may well be a reduced intake of mineral salts in those with low energy diets and there is now evidence that sudden death from ischaemic heart disease is associated with decreased concentrations of some metals in the heart muscle.

Decreased concentrations of magnesium in the hearts of those dying suddenly from ischaemic heart disease have been reported in several studies,¹⁻³ and Seelig⁴ has estimated that Western diets provide insufficient magnesium to maintain magnesium balance in men. There is a significant decrease in the concentration of magnesium in the heart muscle of normal men compared with normal women,⁵ which corresponds with the increased incidence of ischaemic heart disease in men.

In addition there are decreased concentrations of potassium and iron⁶ and an increased concentration of calcium^{3,6} in the heart muscle of subjects dying suddenly from ischaemic heart disease. The increase in calcium, as suggested by Anderson *et al*,³ is probably secondary to the decreased magnesium concentration. These results therefore suggest that those dying suddenly from ischaemic heart disease are relatively deficient in magnesium, potassium, and iron. Deficiencies of these same metals have been identified as contributing to the clinical problems in kwashiorkor and we have suggested that "empty calorie malnutrition"—diets adequate in calories but low in essential metals—may affect the heart both in kwashiorkor and in ischaemic heart disease.⁶

Published figures show⁷ that brown bread contains 30% more iron, twice as much potassium, and three times as much magnesium as white bread. The group

Scan reports on 200 patients

	No of patients	Scan report	
		Normal	Abnormal
Pancreas normal	137	88 (64%)	49 (36%)
Acute pancreatitis (and relapsing acute pancreatitis)	15	3	12
Chronic pancreatitis (and relapsing chronic pancreatitis)	25	1	24
Cancer of pancreas	23	1	22
	48	2 (4%)	46 (96%)

reported by Professor Morris and his colleagues with high fibre intake (and lower incidence of ischaemic heart disease) would obtain 200 mg magnesium per week more than the low-fibre group from their brown bread alone, and this is 5-10% of the weekly total required to stay in magnesium balance.⁴ It may be the metal content of brown bread rather than the fibre which protects the consumer from ischaemic heart disease.

The data collected by Professor Morris and his colleagues could be used to estimate the weights of magnesium, potassium, and iron consumed by their subjects, and this would be worth further investigation.

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¹ Chipperfield, B, and Chipperfield, J R, *Lancet*, 1973, **2**, 293.

² Behr, G, and Burton, P, *Lancet*, 1973, **2**, 450.

³ Anderson, T W, et al, *Canadian Medical Association Journal*, 1975, **113**, 199.

⁴ Seelig, M S, *American Journal of Clinical Nutrition*, 1964, **14**, 342.

⁵ Chipperfield, B, and Chipperfield, J R, *American Heart Journal*, 1977, **93**, 679.

⁶ Chipperfield, B, and Chipperfield, J R, *American Heart Journal*. In press.

⁷ McCance, R A, and Widdowson, E M, *The Composition of Foods*, MRC Special Report No 297, London, HMSO, 1960.

Allergic bronchopulmonary aspergillosis

SIR,—Your recent leading article on bronchopulmonary aspergillosis (3 December, p 1439) states that continuous oral corticosteroid treatment diminishes the frequency of the acute episodes and reduces the likelihood of permanent and severe lung damage. It is then stated that "mandatory treatment with corticosteroids" is to be given as soon as the diagnosis is made.

It would be reassuring to know that continuous corticosteroids can prevent the severe lung damage that sometimes occurs, but these statements have been made without any references to support them. We need to be able to see the evidence before submitting so many patients to regular and lifelong steroid treatment.

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* * * Asthmatics whose disease is complicated by chronic allergic bronchopulmonary aspergillosis have been shown in a comparative study to have more severe respiratory damage than those not so complicated. It is a common clinical impression that some patients with allergic aspergillosis become respiratory cripples with extensive lung fibrosis and bronchiectasis.¹ These complications are the result of allergic reactions in bronchi and lung associated with aspergillus hypersensitivity. Corticosteroids have been shown to reduce the duration² and the number³ of acute radiographic shadows which are associated with these allergic reactions. Moreover, it has also been demonstrated that many of these reactions are subclinical and so cannot all be controlled by giving intermittent corticosteroids on the basis of symptoms. It would seem reasonable therefore to maintain patients who have evidence of recurring allergic episodes on continuous moderately low-dose corticosteroid therapy. Prospective studies of patients diagnosed and selected for treatment at the very

start of the disease could provide proof of whether continuous corticosteroids do help, but such a study has not been carried out, and the practical difficulties of doing such a study are formidable.

However, most experts in allergic pulmonary diseases subscribe to the view that long-term corticosteroids is the treatment of choice and that the risk of leaving the patient known to be experiencing frequent radiographic shadows without continuous corticosteroids is greater than the risks of long-term moderate dose corticosteroids.—ED, *BMJ*.

¹ Malo, J I, Pepys, J, and Simon, G, *Thorax*, 1977, **32**, 262.

² McCarthy, D S, and Pepys, J, *Clinical Allergy*, 1971, **1**, 261.

³ Saffirstein, B H, et al, *American Review of Respiratory Diseases*, 1973, **108**, 450.

Scan-demonstrated ilioportal shunt with resolution

SIR,—The letter from Dr E P Wraight (25 February, p 507) prompts us to report the following case.

A 64-year-old man presented with 24 h swelling of the whole of the left leg. Ascending x-ray venography revealed occlusion of the upper femoral and iliac veins. Radionuclide venography was performed with injection of 2 mCi of ^{99m}Tc-macroaggregated albumin into a dorsal vein of each foot with venographic pneumatic tourniquets to direct the isotope into the deep veins. The scan revealed a normal right deep venous system and inferior vena cava, but occlusion on the left from the mid-femoral region to the vena cava. Multiple collaterals were noted, passing upwards over the abdominal wall and across to the opposite iliac veins. During subsequent lung scanning uptake of isotope was noted in the left lobe of the liver—seen on both anteroposterior and lateral views—demonstrating collateral circulation via the umbilical vein. The patient was treated with thrombolytic therapy (streptokinase) and complete lysis of all major thrombi was achieved. When the scans were repeated at the end of thrombolytic therapy (five days), in addition to confirming complete lysis, it was noted that there was now no uptake of isotope in the liver, demonstrating that the umbilical vein ilioportal shunt had closed.

As radionuclide venography becomes more widely used this phenomenon will be seen with greater frequency. Our observations confirm the findings of Dr Wraight, but we would like to point out that the presence of this sign does not necessarily imply inferior vena caval obstruction. As in our case it may occur when there is major occlusion of the femoral and iliac veins with extensive collateral circulation even though the vena cava is normal.

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Ban on dental anaesthetics

SIR,—An ad hoc meeting of 16 anaesthetists of the North-west Region was held in Manchester on 2 February to discuss the recent recommendation made jointly by the BMA and the Association of Anaesthetists (24-31 December, p 1680) that we "discontinue giving dental anaesthetics under the NHS as from 1 January 1978, except to children under 16, old age pensioners, and cases of special hardship, particularly the mentally ill." They have asked me to write on their behalf to

say that, while agreeing that the current fees for dental anaesthetics were derisory and applauding the, albeit hitherto unsuccessful, efforts of the profession's representatives to improve them, they were of the unanimous opinion that

(1) Withdrawal of services from selected cases would be ineffective. The only effective action would be withdrawal from all general anaesthetic services to dental patients under the NHS by all types of practitioner including dentists. Such unanimity was unlikely to be achieved.

(2) Such action might place our dental colleagues in a difficult position vis-à-vis their legal responsibilities.

(3) Such action would encourage the administration of dental anaesthetics by relatively unskilled persons. Therefore no member of the meeting was willing to implement the recommendation as it stood.

(4) On the other hand dental surgeons should be encouraged to accept patients on a private rather than an NHS basis.

(5) Fullest use should be made of the "special fee" provisions.

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* * * A list of the names of those who attended the meeting was appended to Dr Young's letter.—ED, *BMJ*.

SIR,—The present campaign to achieve a more realistic scale of fees for the administration of dental anaesthetics, although a welcome step in the right direction, is, I believe, misdirected, and because of that it is going to find the attainment of the desired goal long and difficult to achieve. Refusing anaesthesia to adults is striking at the least vulnerable. It may appear hard to suggest it, but the most likely lever to apply is to refuse to anaesthetise children and old age pensioners. This strikes at the Department of Health and Social Security. The children are in no danger of being hurt and many of the old age pensioners attract a special fee. The children in theory at least can be seen and treated by the local authority clinics and school dental services, except that these clinics are not geared to managing the problem which would be thrust suddenly upon them. They would be swamped and their capability demonstrated to be inadequate. The authorities would then be forced either to concede our demand or properly to equip and greatly increase the number of clinics and to staff them with nurses, dentists, and properly qualified anaesthetists. I believe they would rather not be faced with this unpredictable expense. And even if they were, a new proper service could be negotiated, this time with realism.

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Distinction awards

SIR,—Once again the controversy over distinction awards is raised. The "have-nots" oppose and the "haves and might-gets" support.

I oppose. Let us have a system in which designated posts attract designated salaries, with high rewards for university professors, teaching hospital consultants, regional specialists, and "senior consultants" (one for each