cases, although in two female patients this was not obtained until necropsy. There were 19 female and two male patients, the mean age of presentation was 57.9 years, and seven patients (33%) were over the age of 65.

These data reveal that in Tayside the annual incidence of primary biliary cirrhosis is 10.6 per million. On 31 December 1979 16 patients with the diagnosis were still alive, revealing the point prevalence as 40.2 per million. The incidence figure is almost twice that found by Dr Triger in Sheffield (5.8 per million), and by other workers in NE England (6.0 per million—as reported at the September meeting of the British Society of Gastroenterology by Hamlyn *et al.*). The lower value for point prevalence may indicate higher mortality in Tayside, although it is similar to the figure in the Newcastle upon Tyne study (47 per million).

The weakness in the Tayside data is the paucity of information on the number of non-biopsied cases during the study period, and on the number of biopsied cases alive prior to 1975. An attempt is being made to rectify this problem at present, but it is unlikely that these gaps in information have distorted the annual incidence figures greatly or significantly altered the point prevalence as late as the end of 1979.

W STUART HISLOP

Department of Medicine,
Ninewells Hospital and Medical School,
Dundee DD1 9SY

¹ Sherlock S, Scheuer PJ. *N Engl J Med* 1973;289: 674-8.

Finger wrinkling after immersion in water

SIR,—Dr G Alvarez and others question the usefulness of the finger wrinkling test, as one-third of the patients investigated by them did not show any skin wrinkling (30 August, p 586).

I recall Mr Wilfred Hynes, at a British Association of Plastic Surgeons meeting in Bristol some years ago, pointing out that when one describes a new operation or test your colleagues do two things—first they modify the procedure and then they come back and tell you that it does not work. The authors kindly refer to my description of the test, but I must point out that they did not carry out the test as described by me.¹ I clearly stated that the hand and forearm should be immersed in water at 40°C for 30 minutes. They did not immerse the forearm, nor did they keep it in water for 30 minutes.

I carry out this test as a routine on patients attending my clinic and find it most useful. A small proportion, perhaps 10-15%, do not show skin wrinkling and in these the test is of no use, but neither is it misleading. Prospective users of this test should also be warned that it does not become positive for a few days after peripheral nerve injury.

SEAMUS O'RIAIN

St Vincent's Consultants
Private Clinic,
Dublin 4

¹ O'Riain S. *Br Med J* 1973;iii:615-6.

SIR,—Dr G Alvarez and others (30 August, p 586) state that it is safe to say that sympathetic function is preserved if finger wrinkling after immersion in water is observed. However, Bull *et al*¹ showed that a sympathectomised hand deprived of its blood supply will wrinkle normally. The corollary may well be true—that a hand with an intact sympathetic supply but a high blood flow might not wrinkle. This would explain the large percentage of false-positive results that Dr Alvarez and his colleagues found. It is known that an individual may have different flow rates in the two hands. It has been suggested that the dominant hand has a higher flow rate.² They tested only one hand: was it the patient's dominant hand?

I feel that they have usefully pointed out the possibility of a false-positive result occurring with this test. It would have been even more useful to have tested both hands to ascertain whether the variance in their results was symmetrical. If they had done so we would now know whether the opposite hand could be used as a control in cases of unilateral disease such as in peripheral nerve injury.

D J WILLIAMS

Royal National Orthopaedic Hospital,
Stanmore, Middx HA7 4LP

¹ Bull C, Henry JA. *Br Med J* 1977;ii:551-2.

² Kumar PP, Kovi J. *JAMA* 1978;70:837-40.

*.*We sent this letter to the authors, and Dr Alvarez replies below.—ED, *BMJ*.

SIR,—Testing for finger wrinkling was carried out under ordinary bedside conditions. Our habit was to use the right hand as a rule, but this was not invariable and dominance was not ascertained. Mr Williams's theoretical objection therefore stands, although we feel that if in normal individuals wrinkling in only one hand after prolonged wetting were a habitual occurrence attention would have been drawn to it.

A number of our subjects were manual workers. It could thus be argued that mild thickening of the skin over finger pulps and hypothetical trauma to peripheral nerves could account for some of our false positives, but not for as many as we found.

G ALVAREZ

Neurological Service,
University of Chile,
Hospital del Salvador,
Santiago, Chile

Porphyria cutanea tarda and beta-thalassaemia minor with iron overload

SIR,—I would like to answer the points raised by Dr R S Day and his colleagues (20 September, p 809) concerning my case report of familial porphyria cutanea tarda and β -thalassaemia minor in a mother and daughter (24 May, p 1255).

(1) They state that the urinary uroporphyrin levels quoted are low for overt porphyria cutanea tarda in their experience. It is clearly stated in the report that porphyria cutanea tarda was not clinically overt in 1968 when the urinary uroporphyrins were measured. I would also refer them to the extensive experience of Harber and Bickers,¹ who state that the levels of urinary uroporphyrin vary widely and cannot be correlated with the degree of clinical involvement in any absolute manner.

(2) Dr Day and his colleagues state that a full porphyrin analysis is necessary to confirm the diagnosis of porphyria cutanea tarda, and raise the possibility of variegate porphyria in the mother. A full biochemical porphyrin analysis is, of course, necessary for accurate diagnosis and it was performed in both mother and daughter, but for

reasons of brevity details of the full biochemical porphyrin analysis were not included in the short report. However, raised urinary uroporphyrins and low (as reported in both patients) or slightly elevated urinary coproporphyrins are characteristic of porphyria cutanea tarda unlike variegate porphyria, where raised urinary coproporphyrins predominate.^{1,2} Urinary porphobilinogen levels (usually raised in variegate porphyria²) were repeatedly normal in both mother and daughter, (characteristic of porphyria cutanea tarda). Elevated faecal coproporphyrins were detected in the mother in 1968 but have not been found since. Faecal protoporphyrin excretion has been repeatedly normal in both mother and daughter (characteristically elevated in variegate porphyria and normal in porphyria cutanea tarda).²

(3) Clinically, despite a long follow-up of 16 years the mother has not shown any acute abdominal crises or neuropsychiatric episodes to suggest a diagnosis of variegate porphyria. Both patients exhibited hepatic siderosis and urinary uroporphyrin excretion decreased on iron removal, a characteristic feature of porphyria cutanea tarda.^{1,2}

I would like to thank Dr Day and his colleagues for drawing attention to the typographical error resulting in the omission of an important line in the published text (see correction in this issue, p 1040). However, I strongly submit that on the evidence of the clinical and biochemical data presented the diagnosis in mother and daughter is porphyria cutanea tarda.

ROGER CHAPMAN

Royal Free Hospital,
London NW3 2QG

¹ Harber LC, Bickers DR. In: Malkinson FD, Pearson RW, eds. *Yearbook of dermatology*. Chicago: Yearbook Medical Publications, 1975:9-47.

² Meyer UA. In: Isselbacher KJ, ed. *Principles of internal medicine*. 9th ed. New York: McGraw Hill Inc, 1980:494-500.

Laboratory features of pleural effusions

SIR,—Following your leading article on laboratory features of pleural effusions (20 September, p 763), we would like to present a recent case in which an additional simple laboratory test was of value in the diagnosis of a pleural effusion of uncertain origin.

A 22-year-old Iranian design student was admitted for elective splenectomy. Idiopathic thrombocytopenic purpura had been diagnosed some six years previously, and she had been maintained on corticosteroid therapy. The surgical resection was straightforward with minimal trauma, and the immediate postoperative course was quite satisfactory. Two days postoperatively she developed a tachycardia, fever, leucocytosis, and left pleuritic chest pain, although no haemoptysis and no sputum. Chest radiography showed some collapse and a small effusion at the left base. A ventilation and perfusion lung scan did not show any features of pulmonary embolism, and this was thought to be postpneumonic in origin. There was no clinical improvement with physiotherapy and broad-spectrum antibiotics, and repeated chest x-ray examinations over the next week confirmed the auscultatory findings of a rapidly enlarging left pleural effusion. This was repeatedly aspirated, and 1150 ml of heavily bloodstained fluid was removed. This was sterile on culture, and gas-layer chromatography showed no metabolites of anaerobic infection. Although there had been little clinically to suggest pancreatitis, the amylase content of the pleural fluid was assayed and found to be markedly elevated at 2352 and 2325 U/l. The serum amylase concentration at this time was 310 U/l (normal 70-300 U/l). Following complete aspiration the clinical features returned to normal, and the patient was discharged.

Pleuropulmonary complications are well documented in pancreatitis, with an incidence