encountered. We conclude that this offers a practical alternative to percutaneous cannulation of the subclavian vessels, particularly in patients with haemostatic abnormality.

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Spurious polycythaemia resolving during observation

SIR,—You recently published an interesting account by Dr L E Ramsay (13 May, p 1251) of spurious polycythaemia developing during a period of clinical observation. Very little has been documented about the natural history of this interesting condition. Follow-up observations that have been made indicate an increase in morbidity and mortality, generally from thromboembolic disease.^{1,2} We were interested to observe the resolution of this condition over several months in a patient of ours who presented having suffered a cerebrovascular accident. The patient also had horseshoe kidneys.

A 69-year-old printer presented with loss of consciousness followed by left-sided weakness. There was no history of previous syncopal episodes, visual disturbances, hypertension, gout, renal, cardiac, or lung disease, pruritus, headaches, or haematuria. He had noted two episodes of transient weakness of the left side over the preceding year and described himself as being prone to anxiety. He drank about 4 pints (2.4 l) of beer daily and smoked about 10 small cigars. There was no significant family history of disease. He had been taking digoxin, frusemide (40 mg daily), and potassium supplements for 12 months for ankle oedema but had no other symptoms of cardiac failure.

He was obese and plethoric; weight 98 kg, blood pressure 140/70 mm Hg, pulse 80/min, multiple ectopics. Cardiac, respiratory, and abdominal examinations were normal. He had a flaccid left-sided hemiparesis with upgoing left plantar response and left homonymous hemianopia. Fundi were normal and there was no nystagmus.

Investigations revealed haemoglobin concentration 20.9 g/dl, erythrocyte count $6.4 \times 10^{12}/l$ ($6\,400\,000/mm^3$), packed cell volume 0.625 (62.5%), leucocyte count $19.8 \times 10^9/l$ ($19\,800/mm^3$) with normal differential, platelet count $293 \times 10^9/l$ ($293\,000/mm^3$), erythrocyte sedimentation rate 10 mm in 1st hour. The blood urea concentration on admission was 18 mmol/l (108 mg/100 ml) but returned to normal within 48 h. Serum electrolyte concentrations were normal, as were liver function tests, serum cholesterol, triglyceride, urate, glucose, acid phosphatase, and arterial blood gas analysis. Leucocyte alkaline phosphatase score was 100 (normal range 35–100). Red cell mass was 29 ml/kg (normal range 25–35 ml/kg), plasma volume (labelled albumin technique) 26 ml/kg (normal range approximately 40 ml/kg). Tests for rheumatoid factor were negative. Intravenous pyelography showed horseshoe kidneys with normal excretion, creatinine clearance 70 ml/min.

The raised haemoglobin concentration on admission was assumed to be secondary to dehydration but persisted despite rapid restoration of the blood urea to normal with rehydration. The normal red cell mass with reduced plasma volume indicated "stress" polycythaemia (syn spurious, relative, or pseudo polycythaemia, Gaisböck's syndrome), which was supported by the history of smoking, obesity, and anxiety and the lack of evidence of primary or secondary polycythaemia. Diuretic therapy was not con-

tinued. Over the ensuing four months the haemoglobin concentration fell to 17.7 g/dl and the packed cell volume to 0.548 (54.8%), these levels having been maintained since that time (now seven months).

The alcohol intake³ and cigar smoking⁴ may have contributed to the reduction in plasma volume in this patient. Diuretic therapy was probably not contributory as it was of greater than one month's duration. The association with horseshoe kidneys is interesting but probably incidental. The resolution remains unexplained, but cessation of smoking, reduction in weight and alcohol intake, and reduced activity following hemiparesis are potential factors. The patient has made a good functional recovery from his stroke.

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Comparison of the tine and Mantoux tuberculin tests

SIR,—Despite the care taken by Drs J A Lunn and A J Johnson in the design and collection of data forming the basis of the report of the Tuberculin Subcommittee of the Research Committee of the British Thoracic Association (3 June, p 1451) the conclusion that the tine test is unsuitable for epidemiological use because of the high proportion of negative and doubtful results in Mantoux-positive examinees is at variance with experience in the west of Scotland.

Apart from the basic and perhaps insuperable consideration of whether the simple physical effects of puncturing the skin with a tine rather than splitting it with a hypodermic needle are comparable, the measurement of the diameter of the single largest indurated papule of the tine test reaction, excluding the increments of the other times, might bias observations in favour of the single reaction of the tuberculin needle. A study group comprising student nurses is neither demographically nor immunologically characteristic of the general population of this country.

Our epidemiological studies in the west of Scotland¹ have shown an appropriate degree of correlation between the presence or absence of radiological evidence of tuberculosis and tine test reactivity. In a contact survey following the identification of 11 active cases of pulmonary tuberculosis in the Lanarkshire village of Harthill in 1976² 3000 residents over the age of 14 were offered 70-mm mass miniature chest x-ray and a tine test, which was read by the same observer recording reactions 4 and 5 only on the tine test reading card as positive. The results for 282 men and 291 women were compared with those for 6857 men and 8206 women in age-matched total samples of the populations of Renfrew and Paisley.^{3,4} The same decline in tuberculin sensitivity, more marked in women after the age of 45, was observed as that noted in using the conventional Mantoux test.¹ The high-risk Harthill population exhibited the same higher reactivity levels as Renfrew compared

with the low-risk population in Paisley, and tine test positivity conformed satisfactorily with radiological evidence of tuberculosis.

The epidemiological value of the test was further demonstrated by the identification of a cohort of 50- to 54-year-old men and women with an apparent common excess exposure experience to tuberculosis in Harthill compared with the other two communities and who would require prolonged surveillance.

Larger studies of properly drawn samples of the general population would seem indicated before discrediting a widely used, safe, and convenient form of tuberculin testing which seems perfectly adequate for epidemiological purposes.

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Schizophrenic neurasthenic defect

SIR,—With reference to your leading article (8 July, p 76) stimulated by the paper of Cheadle *et al*,¹ surely it is no new finding that schizophrenics may show a deterioration succeeding the productive symptoms of the acute psychotic episode—indeed this was an integral part of Kraepelin's description.² Since this first description Germanic psychiatrists have recognised the deterioration also called schizophrenic dementia or defect. Huber,³ in a comprehensive review, describes a neurasthenic syndrome which is often revealed with the resolution of the more dramatic symptoms of schizophrenia. Johnstone *et al*⁴ have recently resurrected the suggestions of several workers, including Huber, that schizophrenic defect can be associated with demonstrable cortical atrophy. Rather than be surprised at the ongoing difficulties of remitted schizophrenics we should perhaps take heart that many can lead apparently normal symptom-free lives.

In a pilot study involving 31 schizophrenics from a depot phenothiazine clinic, in all of whom the diagnosis was confirmed according strictly to the criteria of Schneider⁵ or Spitzer and Endicott,⁶ I found that nearly half appeared to be leading unimpaired lives. Fifteen patients were either employed full time (8) or fulfilling a complete domestic role. A further four were employed part time. One-third were free from any defect of drive, sociability, or the capacity for emotional expression. Seventeen rated themselves as back to or better than their premorbid level. The "distinct signs of disease" which Bleuler⁷ saw in all his discharged schizophrenics were often quite absent. Thirty-nine per cent of patients had been free of productive psychotic symptoms for more than two years.

It is clear that many schizophrenics today have a prognosis no different from that of manic depressive psychosis—that is, to recover from the acute psychotic episode without demonstrable defect. What is less clear is whether this represents a real change from the past or whether the "mild deterioration" only which Bleuler saw in 60% of his patients with the ability to pursue an occupation preserved was a notional rather