associated—as is now becoming apparent. Indeed, the situation with regard to both B27 and B5 associations may vary in different parts of the world. In our patients with Behçet's triad, two out of four are B5 positive and one out of four is B27 positive. Of those with "definite" Behçet's disease (by the criteria of Mason and Barnes²), two out of 11 are B5 positive and only one out of 11 is B27 positive. The connection with the B5 antigen seems less strong than in Turkey but further work is necessary to clarify the position.

The criteria of Mason and Barnes are valuable in indicating some measure of diagnostic certainty. Patients with the triad of symptoms undoubtedly have Behçet's syndrome. But some patients satisfy their criteria at the "definite" level without the concurrence of mouth and genital ulceration which I would now regard as obligatory. Nor would I attach much importance to the presence or absence of a family history.

Thus the stated prevalence rate of 0.064 per 10 000 can be only an estimate of the disorder's prevalence: it may be a slight overestimate. In any event it contrasts markedly with the Japanese finding of 1 in 10 000.⁶

M ANNE CHAMBERLAIN

Rheumatism Research Unit,
School of Medicine,
University of Leeds

¹ Chamberlain, M A, *Annals of the Rheumatic Diseases*, 1977, **36**, 491.

² Macrae, I, and Wright, V, *Annals of the Rheumatic Diseases*, 1973, **32**, 16.

³ Haslock, I, *The Arthritis Associated with Crohn's Disease: A Family Study*. MD thesis, University of Edinburgh.

⁴ Moll, J M H, *A Family Study of Psoriatic Arthritis*. DM thesis, University of Oxford.

⁵ Mason, R M, and Barnes, C G, *Annals of the Rheumatic Diseases*, 1969, **28**, 95.

⁶ Aoki, K, Fujioka, K, and Katsumata, H, *Japanese Journal of Clinical Ophthalmology*, 1971, **25**, 2239.

Burn hazard with cement

SIR,—The article by Mr M W Flowers (13 May, p 1250) contains some inaccurate and misleading statements about the lime content and caustic properties of Portland cement and concrete that require correction.

Mortar containing lime or hydraulic cement has been used by humans since ancient times and its characteristic of being an alkaline or caustic material has always been present. Some persons seem to be particularly sensitive to skin reactions with caustics while others have more tolerance to contact. Lime is a product of universal distribution, used for many purposes, and knowledge of its properties is widespread.

Portland cement is a hydraulic product, which means that the constituents will react with water and in so doing it becomes a hydrated material. Water reacts with the silicates, aluminates, and any free lime which is sometimes present in small quantities. As a result of this reaction with water calcium hydroxide (hydrated lime) is formed. This is responsible for giving a cement mortar or concrete its alkaline or caustic property. Hydrated quicklime is the same material as this reaction product.

There is no "free calcium oxide" in hydrated Portland cement concrete. When the concrete is fresh and plastic, calcium hydroxide is present and is the reason for "burns" when proper protective measures are not followed. It is only necessary for the worker to avoid contact on exposed skin for any prolonged length of time. The use of watertight boots, gloves, and clothing will prevent this contact, while any accidental splash landing on exposed skin must be promptly washed away.

After concrete loses its plasticity and becomes

hard any calcium hydroxide residing on the surface rapidly reacts with carbon dioxide from the atmosphere and becomes a relatively inert material that is no longer caustic. Hardened concrete will probably contain only 15% Portland cement and the remainder will be combined water, sand, and coarse aggregates (possibly limestone in this instance). Of the 15% cement in the concrete, about 25% of calcium hydroxide will ultimately be generated; this means that the maximum content of calcium hydroxide will be 15% × 25% = 3.75%, which is 10% of the value quoted in Mr Flowers's report. With reference to the statement in the article that hardened concrete contains "37% by weight of free calcium oxide," it must be assumed that this refers to the total calcium oxide in the concrete as reported in the customary manner for chemical constituents and therefore includes the calcium in the aggregate. Thus it does not mean that free calcium oxide actually exists in the concrete, but is simply the quantity of calcium, expressed as the oxide, in the entire mass.

Since some persons will use this material without regard to warnings or without knowledge of the product it would be most helpful if medical personnel could easily recognise the symptoms and provide the proper attention. It is common practice in the United States for manufacturers of Portland cement to place warning notices on sacked cement.

N R GREENING

Director,
Chemical Physical Research Department

J R TONRY

Principal Research Engineer,
Environmental Portland Cement Association

Skokie, Illinois

Thyroid disease and pregnancy

SIR,—A paper on "Myxoedema in young women" that I published in 1963¹ would appear to be relevant to your leading article (7 October p 977). That paper described four women between 25 and 37 years old who showed good evidence of subhypothyroidism when seen 3–20 months after normal confinements.

Their thyroid glands could not be felt or were very small. They all returned to full health on thyroid treatment by mouth and became pregnant again between three months and five years later and had healthy babies. One developed lupus erythematosus, which responded well to treatment, but she died from a florid systemic form of it in 1976. The others have remained well on permanent oral thyroxine.

In April 1968 two other striking cases were seen within 10 days. Women 23 and 22 years old were referred by their general practitioners for investigation of suspected myxoedema. The clinical picture was frank but not florid, their thyroid glands were very small or impalpable, and test results confirmed the diagnosis—namely, low basal metabolic rate, high blood cholesterol concentration, delayed ankle and knee jerks, and low-voltage electrocardiograms. The first gave negative tests for thyroid antibodies. She had a son nearly 3 years old, the other had sons of 22 months and 8 months. Both returned to normal on oral thyroid and one had a baby girl after 14 months, the other a baby girl after two years.

In May 1977 Ginsberg and Walfish² reported from Toronto on "postpartum transient thyrotoxicosis with painless thyroiditis." Of their five patients (whose thyrotoxicosis resolved within four months), four later developed transient hypothyroidism and one of these developed permanent myxoedema. They

thought that painless subacute thyroiditis was probably the underlying condition in most of their patients. They referred to the 1976 paper by Amino *et al*³ from Osaka, which also described transient hypothyroidism occurring 3–6 months after delivery. In 1963 the BMA librarian could trace no references to myxoedema following pregnancy; and another search completed in August 1977 revealed only the three papers that I have mentioned.

The observation of this group of cases in Hartlepool has always left a suspicion that they represent the tip of an iceberg, as proved to be the case with Hashimoto's disease after 1956.⁴ To find other cases all women should be briefly seen six months after delivery to determine if there are any symptoms of subhypothyroidism (especially puffiness of the face) and to feel whether the thyroid gland is abnormally small, abnormally large, tender, or firm. In my opinion this condition is due to postpregnancy hyperinvolvement of the thyroid.

R T COOKE

Hartlepool, Cleveland

¹ Cooke, R T, *Journal of the College of General Practitioners*, 1963, **6**, 626.

² Ginsberg, J, and Walfish, P G, *Lancet*, 1977, **1**, 1125.

³ Amino, N, *et al*, *Journal of Clinical Endocrinology and Metabolism*, 1976, **42**, 296.

⁴ Luxton, R W, and Cooke, R T, *Lancet*, 1956, **1**, 105.

Clinical information on x-ray and pathologist requests

SIR,—Dr B Golberg's Personal View on x-ray examinations (7 October, p 1017) includes a *cri de coeur* common to pathologists as well as radiologists. His solution is to include "imaging" as a subject in the undergraduate and postgraduate curriculum. May I suggest another?

Personal contact between radiologist and clinicians is an unrivalled opportunity for exchange of information. How often does Dr Golberg share his coffee break and lunch with junior clinical medical staff? Informal social exchange at this level may be worth more than many periods of formal education.

L J H ARTHUR

Derbyshire Children's Hospital,
Derby

Beta-blockade in subarachnoid haemorrhage

SIR,—In their study of patients with subarachnoid haemorrhage (SAH), Mr G Neil-Dwyer and others (7 October, p 990) have demonstrated that treatment with propranolol and phentolamine has a highly significant cardioprotective effect. The cardiac lesions seem to be related to excess catecholamines and beta-blockade therefore appears to be the crucial therapeutic factor. We have recently had a patient with SAH in whom treatment with oxprenolol failed to prevent ECG changes, which were so grossly abnormal that we were concerned that the patient might have additionally sustained a silent myocardial infarction.

The patient, a fit 62-year-old man, had been maintained on oxprenolol 80 mg thrice daily for hypertension, which was thus well controlled. However, shortly after his admission with SAH (confirmed by lumbar puncture) his blood pressure rose to levels of about 180/105 mm Hg and oxprenolol was increased to 80