towns in their period of rapid growth.

Much more comparable to the latter were the large population movements in mainland Greece from rural areas to the towns during its civil war, the 1950s and beyond, and about which much has been written. Indeed, the recent urbanisation of Greece has been more rapid than in most countries at a comparable stage of socioeconomic development. In consequence, for example, whereas 27% of the nation lived below an altitude of 100 m in 1951, this had risen to 55% in 1961. This could be investigated by examining mortality from childhood leukaeemia in Greece in relation to that of other countries in the 1960s, when modern therapy had not yet affected national rates.

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Fashions in breastfeeding

SIR,-It is often amazing what medical publications are noticed, and how their findings are implemented. A new fashion in breastfeeding in Australia is that the mother's being told to feed from only one breast at each feed. The most extreme example of this type of advice was a woman with twins who was told to feed both babies from the same (one) breast at each feed.

This fashion seems to come from overinterpretation of studies such as that by Woolridge and Fisher. They suggested that failure to thrive in some babies might have resulted from a lack of higher-energy hind-milk if the mother followed the timed feeds on each side routine. But in fact Woolridge and Fisher actually stated that the baby should "come off the breast spontaneously before being offered the second breast should the baby still show signs of hunger". Moreover, a recent study has shown that the amount of milk in a breast varies before each feed and that the fat content of breast milk does not increase substantially until the breast is 40% full. Therefore this new fashion will probably have little effect on the average infant's fat intake at any particular feed whereas it may lead to discomfort for the mother. We seem to have replaced one dogma with another, equally unfounded.

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DOROTHY MACKERRAS


Catamenial epilepsy and goserelin

SIR,-Dr Haider and Professor Barnett (Dec 14, p 1530) report an improvement in seizure frequency in catamenial epilepsy treated with goserelin. They suggest that reduction of serum oestriol concentrations with this gonadotrophin releasing hormone (GnRH) analogue might explain the improvement. We propose that the abolition of cyclical fluctuations of sex steroids might be the mechanism. In premenstrual syndrome (PMS), menstrual migraine, and catamenial epilepsy, the cause of the cyclical features remains elusive. It is recognised, however, that complete suppression of ovarian activity can abolish these symptoms.1,2 The hypo-oestrogenic state induced by GnRH therapy indicates effective ovarian suppression and the clinical improvement described could be due to the elimination of cyclical changes in ovarian hormones.

We would caution against long-term therapy with a GnRH analogue, which effectively creates a medical oophorectomy. Prolonged hypo-oestrogenism significantly increases the risk of osteoporosis and cardiovascular disease.3,4 Additionally, patients commonly experience flushing, vaginal dryness, and dyspareunia.5 Hormone replacement therapy (HRT) can prevent such endocrinopathies, and we have reported the long-term use of goserelin with continuous combined HRT in a patient with severe endometriosis.6 We used goserelin 3-6 mg every 4 weeks with medroxyprogesterone acetate ('Provera') 5 mg and conjugated oestrogens ('Premarin') 0-625 mg, both taken daily and continuously. The endometriosis resolved, she remained amenorrhoeic, and preservation of bone-mineral density was confirmed by dual-energy X-ray absorptiometry. No hypo-oestrogenic symptoms were seen during 12 months of treatment.

We propose that continuous combined HRT supplementation7 will not negate the benefits of goserelin. Cyclical changes of ovarian hormones rather than their absolute concentrations are now widely believed to be important in the genesis of menstrually related disorders. Thus, it is not surprising that the combined oral contraceptive pill, with its seven day pill-free interval, was not effective. Premarin 0-625 mg daily is a bone-conserving dose6 and might protect the cardiovascular system.8

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Post-transfusion fulminant hepatitis B after screening for hepatitis B virus core antibody

SIR,—Since November, 1989, Japanese Red Cross Blood Centres have screened blood for units with high-titre (>20) antibody to hepatitis B virus core antigen (HBeAg) in addition to hepatitis B surface antigen (HBSAg) and surface antibody (HBSAb). The aim of the introduction of the additional HBSAb screening is to reduce the frequency of post-transfusion hepatitis B infection, especially of the fulminant type. The Japanese Red Cross Non-A, Non-B Hepatitis Research Group report (Oct 26, p 1040) complete protection from post-transfusion hepatitis B since the introduction of screening for HBSAb. We have seen the first case of post-transfusion fulminant hepatitis B since the start of this screening.

A 70-year-old man was admitted to Showa University Fujigakou Hospital on Sept 19, 1991, because of fever and jaundice. He had undergone resection of the entire transverse colon because of carcinoma on April 12 of that year. At operation he received four units of blood from four donors. His liver disease began with a slight fever and urine colour change at the beginning of September.

On admission he was jaundiced, and liver function tests were normalised by ultrasonography. Total bilirubin was 11-0 mg/dl, aspartate aminotransferase 821 U/l, alanine aminotransferase 940 U/l, and prothrombin time (PT) 43-8%. He was positive for HBsAg, HBeAg, IgM HBcAb, and HBV DNA (by polymerase chain reaction (PCR), and negative for HBSAb, HBeAg, IgM HAVAb, and HCVAb (anti-C100). Subsequently PT became undetectable, and liver enzymes returned to normal. He continued to undergo treatment, consisting of plasma exchange and haemofiltration.1 After three such treatments he regained clear consciousness with recovery of liver functions. He continued to improve and was discharged on October 26.

The original serum samples from the four blood donors were not available for HBV DNA assay by PCR. The donors, however, were traced by the Japanese Red Cross Kawasaki Blood Centre, and they
were tested again for HBV serum markers. A serum sample from one donor (26-year-old man) proved positive for HBsAb and HBcAb. He had been admitted to a nearby hospital because of liver function abnormalities two months after he gave blood. The hospital record clearly showed that he had contracted typical acute hepatitis B infection.

These findings show that, as predicted, post-transfusion fulminant hepatitis B infection can occur even after the introduction of blood screening for high-titre HBcAb, through blood from donors who, although acutely infected with HBV, are both HBsAg and HBeAg negative at the time of donation.

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Cyclosporin and muscle

Sir,—Arellano and Krupp,1 in their review of muscle disorders associated with cyclosporin, referred to three cases of possible muscular toxicity published by our group in 1989.2 In the table they stated that biopsy was not done in two of our patients and that all had received prednisone. This is incorrect. Our report noted that biopsy, with examination by electron microscopy, was done in all cases, and all had three abnormalities. Moreover prednisone had been discontinued several months before myopathy developed. The statement of that which occurs in vivo,7 where other aminoacids and albumin may be involved.

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Chirality of penicillamine

Sir,—In their review on chirality and antirheumatic drugs Dr Kean and colleagues' report. Despite this oversight, we think that the conclusions in our letter were not inappropriate. Indeed, our review has resulted in amendments to international product information on ‘Sandimmun’. Myopathy is now mentioned as a side-effect and colchicine and lovastatin are noted as possible drug interactions leading to muscular toxicity. It was never our intention to underrate the myotoxicity of cyclosporin.

F. ARELLANO

P. KRUPP

Two types of translucent membrane of caesarean section scar tissue

Sir,—Pedowitz and Schwartz have reported that translucent membrane of transverse caesarean section scar tissue and incomplete uterine rupture occurred in 9.3% (22/246) patients at repeat caesarean section.1 We have graded findings at repeat caesarean section as follows: grade I, neither thinning nor loss of continuity of lower uterine segment; grade II, thinning and loss of continuity but fetal hair not visible; grade III thinning or absence of lower uterine segment and fetal hair visible. The frequency of grade III was 9.1% (18/197) from September, 1982, until now,2 a frequency much the same as that recorded by Pedowitz and Schwartz. However, complete rupture of the lower transverse uterine scar is reported in 0.2–3% of planned trials of labour,3 so what type of translucent membrane is it that ruptures during trials of labour—and an ultrasound scans distinguish one type from another?

Since February, 1989, we have scanned 45 patients with previous caesarean section by high-resolution ultrasound (SSA-250A, Toshiba). 38 patients showed good healing with a thickness more than 1.2 mm throughout and 7 patients showed poor healing with reduced thickness and/or loss of continuity. Of 38 patients with good healing, 10 were delivered vaginally and 28 patients had repeat caesarean section for other obstetric indications.

Of 7 patients with poor healing 3 showed grade III operative findings (translucent membrane). The thinnest thickness of the lower uterine segment in these 3 patients near term by ultrasound is shown in the figure. Patient I showed great variability of thickness in the short term (5–10 min) and also over time (37–39 weeks) but patient III showed little variability (static thinning). Before repeat caesarean section in patient I thickness was never less than 0.5 mm and we predicted grade III; the thickness, by ophthalmic calipers, was 0.5 mm at operation. In patient III, with static thinning, the thinnest portion of the lower uterine segment in patient I (variable thinning) showed good preservation of smooth muscle fibres and a little stromal fibrosis while that of the patient with static thinning showed prominent degeneration and atrophy of muscle fibres and severe stromal fibrosis with hyalinisation.