usually rapidly reversible if the early symptoms are taken as an indication to discontinue the oral contraceptives. Some patients do, however, have difficulty in regaining good health after stopping the pill. We have recently found that oral contraceptives and smoking are the most important contributory factors to patients requiring emergency treatment at an acute migraine clinic.[5] Both men and women smokers come to the clinic after smoking for an average of 20 years, while women taking oral contraceptives come for treatment after an average of less than three years of exposure to the pill. This suggests to me that oral contraceptive use is a more potent cause of vascular disease than smoking, and this has not been generally realised because of the very high oral contraceptive discontinuation rate.

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[1] Gillman, T, in *Biological Aspects of Occlusive Vascular Disease*, ed D G Chalmers and G A Gresham. London, Cambridge University Press, 1964.
[2] Osterholzer, H O, *et al*, *Obstetrics and Gynaecology*, 1977, **49**, 227.
[3] Grant, E C G, *British Medical Journal*, 1968, **3**, 402.
[4] Grant, E C G, *British Medical Journal*, 1969, **4**, 473.
[5] Grant, E C G, *et al*, The Migraine Trust International Symposium, 1976 .in press.

A case of twisted logic

SIR,—In your "Clinics in General Practice" (14 May, p 1260) a patient with a three-week-old injury to the ankle requests an *x*-ray. In spite of the fact that there is no clinical evidence of a fracture the GP trainee is advised to refer her for *x*-rays for medicolegal and psychosocial reasons.

There are no medicolegal reasons for taking *x*-rays. There are, however, medicolegal reasons for making an adequate examination and recording the findings on the notes, including a statement that there is no clinical evidence of a fracture. And, if there is any doubt, there are medicolegal reasons for asking the patient to attend for review. Having fulfilled these obligations, no doctor should order *x*-rays because of an imagined legal obligation. His obligation is to the patient, not to his lawyer. To order *x*-rays for psychosocial reasons may indeed cut short a consultation and save time on a particular case, but the general effect will be to perpetuate the myth that *x*-rays are needed in all injuries, thus increasing the work load for the future. In this case the consultant admitted there was no physical indication for radiography but had no hesitation in consenting to an *x*-ray in order to put on "an impressive show of strength" and convince the patient that there was no fracture. In effect he was putting on an impressive show of weakness by implying that his clinical diagnosis was not reliable and that the patient was right after all to insist on an *x*-ray.

We surely have a duty to educate our patients. Even if we fail to persuade them that a fracture of the ankle can be diagnosed clinically we will have little difficulty in persuading them that there are possible harmful effects of taking too many *x*-rays. And we can remind our patients that the exercise of clinical judgment is recommended by the International Commission on Radiological Protection.[1]

It is ironical that we tend to blame the legal profession for our failure to avoid unnecessary *x*-rays, whereas in fact the legal profession is dependent on the evidence of medical witnesses to establish negligence. Therefore, until we educate ourselves in the need for balanced judgment in ordering *x*-rays then there is little hope of improvement.[2] Balanced judgment depends on our being well informed of the pitfalls in the clinical diagnosis of fractures, and in this connection it is vital that casualty departments should have clear instructions on the principles that should govern discretionary policies in ordering *x*-rays.[3]

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[1] ICRP Committee, *Protection of the Patient in X-ray Diagnosis*. Oxford, Pergamon Press, 1970.
[2] Thomas, D F, *British Medical Journal*, 1971, **2**, 105.
[3] Fowler, A W, *British Medical Journal*, 1970, **1**, 362.

Heating human milk

SIR,—Your leading article (28 May, p 1372) comments on the results of our study on pasteurisation of human milk and suggests that differences in technique account for the differences in our findings and those of Ford *et al*.[1] Our detailed procedure for pasteurisation was as follows: since we wished to simulate a technique which might be used in routine practice, we used whole milk direct from the milk kitchen. This was not processed in any way. Aliquots of 1 ml were transferred to glass tubes (75 mm × 10 mm) in a water bath at 62·5°C for 30 minutes. The samples for protein assays were then frozen at −40°C. Because of the small volumes used, we did not monitor the temperature at the centre of the sample, as suggested in your leader, since we considered that the temperatures would rapidly equilibrate.

The sterilisation procedure appears very similar to that used by the Shinfield group, the principal difference in technique being their use of high-speed centrifugation and filtration to prepare the samples. We consider it unlikely that removal of fat and debris would have a major effect on the heat penetration of such a small sample, and we would suggest that it is most likely that the initial processing may in some way render the lactoferrin and IgA more susceptible to heating.

It is clear from these preliminary studies that, as you suggest, a combined exercise to evaluate the more subtle aspects of the use (and abuse) of human milk is urgently needed.

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[1] Ford, J E, *et al*, *Journal of Pediatrics*, 1977, **90**, 29.

Amniotic fluid AFP in multiple pregnancy

SIR,—Our observations on alpha-fetoprotein (AFP) values in multiple pregnancies agree with those of Dr Sheila L B Duncan and her colleagues (21 May, p 1354). In 14 cases of normal twins, the amniotic fluid AFP levels were within the normal range for singleton pregnancies. The maternal serum AFP levels were, however, elevated.

These findings agree with the fact that a very high proportion of twins, even those which are monozygotic, are in separate amniotic sacs. Only about 2% have a common amniotic cavity.[1] Thus, as far as the amniotic fluid is concerned, twins in separate sacs may be considered as singleton pregnancies, with one fetal liver producing AFP per sac. At the placental interface, however, there is the AFP produced by two fetal livers to pass into the maternal compartment; hence the maternal serum AFP is higher than in a singleton pregnancy.

It is the 2% of twins which are monoamniotic which should in theory have an elevated amniotic fluid AFP. A recent case of ours shows that this is so. A patient underwent amniocentesis at 30 weeks because the ultrasound findings were equivocal. The AFP level of the amniotic fluid was 9 μg/ml (normal < 1 μg/ml). The patient was subsequently delivered of twins who were joined side by side. All organs were enclosed and there were no defects of the neural tubes. There were two pancreases, two duodenums, and a single large multilobed liver, which appeared to consist of two fused parenchymas.

Thus in a situation where there was the equivalent of two livers and an indisputably single amniotic sac there was an elevated amniotic fluid AFP level. However, since most multiple pregnancies are not monoamniotic, it is anticipated that almost all amniotic fluid AFP values in multiple pregnancies will not differ from those of singleton pregnancies.

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[1] Morison, J E, *Fetal and Neonatal Pathology*, 3rd edn. London, Butterworth, 1970.

Is this a record?

SIR,—I was recently asked to see a patient with the most extensive bilateral Dupuytren's contractures I have ever seen. He is now aged 70 and apparently was placed on the waiting list for surgical correction of the deformities in 1952. Perhaps the best way to describe the increasing deformity is his progressive inability to play musical instruments. When he first presented 25 years ago he was a keen clarinettist and saxophonist. As his Dupuytren's progressed he lost his ability to play these instruments and turned to the drums. He now has difficulty in holding the drum sticks.

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Insurance companies' attitude to psychiatric illness

SIR,—In his letter referring to recent suggestions that insurance companies may be prejudiced in their loading of minor psychiatric illness (21 May, p 1350) Dr Andrew Sims says that the neuroses carry a slightly increased risk of premature mortality. Such an assertion demands formidable diagnostic severity. A random survey of a hundred patients taken after three consecutive years of admissions to a neurosis unit with which I was associated