account of a painful hip owing to ischaemic necrosis complicating an old fracture of the femoral neck. During the operation of McKee-Farrar total hip replacement considerable osteoporosis was encountered, and insertion of the femoral component required twice the usual amount of cement. Immediately following reduction of the hip, profound hypotension and bradycardia occurred. There were no warning signs on the E.C.G. Cardiac arrest ensued, and attempts at resuscitation were unsuccessful.

Necropsy showed air and fat in the pelvic veins on the side of the operation, right heart, and in the coronary vessels. There was marked myocardial degeneration. The cause of death was considered to be air embolism acting on a previously defective myocardium.

It would seem possible that air (or fat) embolism might account for some of the cases of transient hypotension with recovery. We now use a polythene tube while inserting the cement and note the considerable quantities of fat and air which are expelled through it. We also feel that we should use an oesophageal stethoscope and a central venous pressure line (for diagnosis and treatment) as recommended recently by O'Higgins.¹—We are, etc.,

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REFERENCE

- ¹ O'Higgins, J. W., *British Journal of Anaesthesia*, 1970, **42**, 459.

Breast-milk Jaundice

SIR,—The leading article on "Breast-milk Jaundice" (25 July, p. 178) was, in our opinion, misleading in several clinical and experimental aspects.

In considering the differential diagnosis of jaundice persisting beyond the first ten days of life the leader discusses a mixed group of diseases. It is diagnostically more valuable to differentiate disorders associated with predominantly conjugated (direct-reacting) hyperbilirubinaemia (for example, neonatal hepatitis, biliary atresia, galactosaemia, etc.) from those associated with unconjugated (indirect-reacting) hyperbilirubinaemia (for example, congenital defects in bilirubin conjugation, inhibition of bilirubin conjugation, etc.) During the first week of life, newborn breast-fed infants have a higher incidence of clinical icterus than is observed in bottle fed infants; however, this icterus is of brief duration and must be distinguished from the prolonged jaundice of certain breast-fed infants which is associated with pregnane-3 α , 20 β -diol in human milk.

The leader suggests that some infants are icteric due to the relatively low intake of milk while breast-feeding. In our experience, infants with breast-milk jaundice and "inhibitor" activity in their mother's milk have good weight gains and thrive. Persistence of inadequate milk intake for the prolonged period suggested should result in marked malnutrition.

The leader states that "the inhibitory substance was at first thought to be 3 α ,20 β -pregnanediol" and seems to conclude that this unusual steroid plays no role in the

syndrome. We disagree with this conclusion based upon the following considerations. 3 α ,20 β -pregnanediol has been isolated from inhibitory human milk by ourselves,¹ and from urine obtained from women with "inhibitory" milk and infants with breast-milk jaundice.² Ramos *et al.*³ refer to a single attempt to isolate the steroid by Professor Wotiss; however, the source of the milk studied and the methods utilized are not provided. Their failure to reproduce the syndrome in vivo by feeding 3 α ,20 β -pregnanediol may result from differences in the vehicle used to solubilize the steroid.

The role of pregnane 3 α ,20 β -diol in the syndrome of breast-milk jaundice is not completely clear. Yet this unusual isomer has only been found in this syndrome where it is present in milk and urine. There must be a relationship between this observation and the clinical syndrome. Lathe and Adlard's⁴ findings are interesting but not conclusive regarding the pathogenesis. One wishes that they had provided details regarding the solubilization of steroids and how they were added to the in vitro system.

We agree that there are numerous unanswered questions regarding the pathogenesis of breast-milk jaundice and that further studies are required. The syndrome is probably of multiple aetiology, and all jaundiced breast-fed infants do not have 3 α ,20 β -pregnanediol in their urine and milk.—We are, etc.,

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- ² Severi, F., Rondini, G., Zaverio, S., and Bruschi, M., in *Abstracts of the European Society for Paediatric Research and the European Society for Paediatric Gastroenterology*, p. 28, Basel, Karger, 1969.
- ³ Rosenfeld, R. S., Arias, I. M., Gartner, L. M., Hellman, L., and Gallacher, T. F., *Journal of Clinical Endocrinology and Metabolism*, 1967, **27**, 1705.
- ⁴ Ramos, A., Silverberg, M., and Stern, L., *American Journal of Diseases of Children*, 1966, **111**, 353.
- ⁵ Adlard, B. P. F., and Lathe, G. H., *Archives of Disease in Childhood*, 1970, **45**, 186.

Benign Sixth-nerve Palsy

SIR,—A leading article (27 April 1968, p. 190) brought to notice the condition of benign sixth-nerve palsy in children. Ten children with this condition seen over a period of 13 years have been described by Knox and colleagues.¹ I would like to draw further notice to this condition by describing the features in a child who was recently under my care.

A 16-month-old boy was admitted to Seacroft Hospital with a history that six weeks previously he had suddenly developed bilateral external rectus palsies. The right eye recovered within four days, but the left rectus palsy had continued until the time of his admission. The day prior to the onset of the palsies he developed an upper respiratory infection with a clear nasal discharge.

There were no other neurological findings on admission. Skull x-ray, E.E.G., and cerebrospinal fluid were normal. Haemoglobin was 85%, W.B.C. 15,100/cu.mm. with a differential count showing 56%

of lymphocytes, E.S.R. 8 mm./hour. Blood culture and urine chromatography for amino-acids and sugars was normal. Viral studies were performed by complement fixation tests on paired sera. Negative tests occurred against mumps, herpesvirus, influenza A and B, adenovirus, psittacosis, Q fever, myxovirus, and respiratory syncytial virus.

Three weeks from the time of his admission, complete recovery of the left eye had occurred.

The relative lymphocytosis in the peripheral blood of our patient is similar to the findings in five of the patients described by Knox *et al.* They postulated the aetiology was a viral neuritis. Though I have found no serological evidence in my patient to support this theory the preceding upper respiratory infection would be in keeping with such a suggestion.—I am, etc.,

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REFERENCE

- ¹ Knox, D. L., Clark, D. B., and Schuster, F. F., *Pediatrics*, 1967, **40**, 560.

Bloodstained Tears

SIR,—I would like to report an unusual clinical finding—namely, that of bloodstained tears.

A boy aged 8 years with abdominal pain was recently admitted to this hospital. His appendix was removed and histology showed submucosal hyperaemia. The next day the classical skin lesions of Henoch-Schönlein purpura appeared. They spread profusely to involve his legs, buttocks, elbows, and hands. He developed profuse bloody diarrhoea and conjunctivitis and became very ill. For three days at the height of the illness copious bloodstained tears were being secreted by haemorrhagic conjunctivae.

He was treated successfully with systemic steroids and local antibiotic drops to the eyes, and is now well.—I am, etc.,

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Consultancy in Radiology

SIR,—Your correspondence on consultancy in radiology (20 June, p. 736; 11 and 25 July, pp. 110 and 227; 1 August, p. 286; 5 September, p. 590) has underlined the serious position radiology and radiologists are facing. There are said to be about 60 unfilled consultant posts; in fact the true figure is probably very much larger as the Department of Health often refuses requests for additional consultant staff.

One must ask the question why are so few interested in radiology in Britain? A recent survey showed that in 1968 30 radiologists emigrated from the United Kingdom and there is no reason to suppose that this figure will diminish.

There are, I suggest, three outstanding reasons: firstly, a strong and reasonable dislike of physics; secondly, a loss of contact with patients; and thirdly, the very poor financial reward for a long and arduous course.