is unfounded and, on average, test weighing gives a result insignificantly different from the true value.

The fact that the slope is rather shallow, although not significant, is of interest; however, it may well be related to the poor accuracy of the scales used. A repeat of the study using an electronic balance ought to lead to a slope appreciably nearer unity.

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Dr Whitfield and co-workers comment:

It is clear that the accuracy of the weighing procedure could be considerably improved by using an electronic balance to record baby weight. However, as mentioned on page 920 of the paper the purpose of the study was to investigate 'routine test weighing in the clinical context, rather than as an optimal research procedure'.

The regression analysis undertaken considered the prediction of 'exact' FW from measurement on TW. Information on FW was required given an observed TW; this was the appropriate direction of the regression equation from a practical standpoint. It was not necessary that the independent variable be measured without error when the analysis was to be considered as predicting a measurement Y conditional on the X as observed. Conclusions were therefore based on the regression of FW on TW and the regression of TW on FW was not considered relevant.

Timing of neonatal cerebroventricular haemorrhage with ultrasound

Sir,

De Crespigny *et al.*[1] described the timing of neonatal periventricular haemorrhage using real time ultrasound scanning. Their results demonstrated periventricular haemorrhage within 6 hours of birth in 71% of 34 infants. These conflict with our results and with those of Levene *et al.*[2] and Hope *et al.*[3]

During the last year we have performed daily ultrasound scans on 290 infants in our unit using an ATL real time 850A scanner with 5 MHz transducers. One hundred and eighty-one infants were less than 1500 g birthweight. Initial scans were performed within 2 hours of birth in inborn infants, and immediately after transfer if born elsewhere in the region. Periventricular haemorrhage occurred in 97, of which 90 could be timed to within a 12-hour period; 80 of these occurred in infants of very low birthweight. Seventeen haemorrhages began before 12 hours after birth, and 13 between 12 and 24 hours. A further 28 occurred between 24 and 48 hours, and 32 after 48 hours. Of 36 outborn infants who bled, haemorrhage occurred after transfer in 30. These figures agree generally with those of Levene *et al.*[2]

Often a preceding precipitating event could be linked temporarily to the development of periventricular haemorrhage (Table). Birth itself could be directly linked to periventricular haemorrhage in the first 12 hours in only 9 infants. Delivery was unmonitored or non-vertex in 7 of them. The other haemorrhages occurring in the first 12 hours were multifactorial preterminal events.

Table *Precipitating factors observed to precede periventricular haemorrhage in 90 infants*

Hypercapnia/acidosis	22
Preterminal event (multifactorial)	16
Pneumothorax	14
ETT problem	12
Birth trauma/asphyxia	12*
No observed cause	12

*3 not transferred until >12 hours old.

Timing of haemorrhage related to increasing birthweight and maturity in our infants. The mean (± SD) birthweight of infants bleeding before 12 hours was 0·91 ± 0·23 kg, mean gestation 27½ weeks. In contrast infants bleeding after 48 hours were larger and more mature (1·25 ± 0·4 kg, mean gestation 29½ weeks).

In 12 of 38 infants sustaining a large (Papile's grade 3–4[4]) haemorrhage, extension was observed at least 24 hours after the initial bleed. Nine of these infants died, reflecting their underlying severe illness.

We cannot explain the differences in the British results compared with those of de Crespigny but perhaps there were differences in the populations. Perhaps celestial orientation has previously unrecognised effects?

References

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4 Papile L A, Burstein J, Burstein R, Koffler H. Incidence and evolution of subependymal and intraventricular hemorrhage; a study of infants with birth weight less than 1500 gm. *J Pediatr* 1978; **92:** 529–34.

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Munchausen syndrome by proxy and pseudo-epilepsy

Sir,

Since writing the article published earlier this year[1] many more cases have been uncovered in which mothers have