Correspondence

Conservative care of the newborn baby

Sir,
We were disturbed to read Dr Hughes-Davies’s report (Archives, 1979, 54, 59) and should like to explain why we regard some of his conclusions as unjustified.

Dr Hughes-Davies describes his hospital care of 14,892 newborn infants delivered in Salisbury during 1969–76. In his management of small or ill babies he places emphasis on correct posture and temperature, early feeding, and minimum handling. With this and with his isolation policy we are in complete agreement. However, we then part company. Modern methods of neonatal monitoring are not used in Salisbury. Nothing is given intravenously. Ventilation and positive pressure devices are not used, nor is phototherapy. Apnoeic attacks are treated with funnel air and oxygen (presumably without monitoring the infant’s blood oxygen tension).

Dr Hughes-Davies justifies his practice by claiming that neonatal complications were ‘seldom met’ and that his babies ‘did well’ at follow-up. The only data he presents concern first-week neonatal mortality. Then, on the basis of a number of unsatisfactory comparisons, he concludes that his results compare favourably with those achieved by ‘more intensive and active intervention’. Furthermore he extols the economic benefits of his approach which requires less equipment, fewer staff, and allows nurses and doctors to get more rest! As one of us has just completed a study of paediatric staffing and equipment for newborn care on behalf of the BPA, we are conscious of the deplorable deficiencies that exist up and down this country. Unless countered, Dr Hughes-Davies’s views may well seriously impede efforts currently being made to correct this sad state of affairs. It is this that prompts us to write and to compare the Salisbury figures with our own. Before doing so, we should like to discuss the various comparisons made by Dr Hughes-Davies. Firstly, he compared his results with those reported for England and Wales, the unjustified implication being that ‘intensive care’ is practised everywhere except in Salisbury. However, the national survey of newborn care referred to earlier shows conclusively that only a handful of the 252 special care baby units in this country have the necessary experienced resident staff and equipment to provide more than a token intensive care service, if that. Incidentally, in making his comparison of first-week mortality Dr Hughes-Davies failed to indicate in the caption to his Table 2 that the figures for England and Wales referred to the whole of the first month of life, not the first week. Similar criticisms apply to his comparison with ‘Wessex neighbours’ about whom no information is provided. Comparison is made between the mortality of very low birthweight infants in Salisbury, where presumably most if not all of such infants are inborn, and University College Hospital where, in contrast, the majority are referred from a wide metropolitan area. We would submit that no conclusion may be drawn from such a comparison.

We should like to compare the Salisbury figures with our own from Southmead Hospital. It should first be explained that although our intensive care service has been steadily improving since it was initiated in 1970–71 (Figure) and although we are now better provided for than most, we still have significant shortages in both staffing and equipment. The special care baby unit of 36 cots at Southmead serves the 4800 inborn infants and acts as a regional referral centre. Therefore many more problem cases may be expected than in Salisbury. Two statistics demonstrate this: the incidence of low birthweight and fatal congenital malformation were respectively 68 and 50% higher at Southmead in 1973 than the average for Salisbury, 1969–76. Thus, with similar quality of care the early neonatal mortality rate (NMR) for Southmead might be anticipated to be about 50% greater than that for Salisbury. In fact the reverse was the case. The NMR for Salisbury for the whole period 1969–76 was 9.3/1000, while that for our department in 1973 was 5.5/1000. The figures for low birthweight infants were 109/1000 for Salisbury and 36/1000 for Southmead; for infants in the birthweight group 1501–2000 g they were 167/1000 for Salisbury and 38/1000 for Southmead, while in that for the group 2001–2500 g they were 19.9 and 8.0/1000 respectively. Incidentally, it seemed reasonable to pool the Salisbury figures in view of the small annual numbers and the fact that the care of the babies was unchanged during the whole period.

A fairer and even more striking comparison in favour of intensive care may be made if infants weighing <1000 g at birth and infants with fatal congenital anomalies are excluded from the analysis. If this is done then the remaining ‘preventable’ NMR for Salisbury was 5.8/1000 livebirths while that for Southmead in 1973 was 3.0/1000; by 1978 the Southmead figure had fallen to 1.7/1000. A final comparison needs to be made for babies of very low birthweights (500–1500 g). The NMR for 105 such infants in Salisbury was 505/1000 while that for the 49 similar infants at Southmead in 1978 was 224 or, if fatal malformations are excluded, 174/1000 (a survival rate of 83%).

If we assume that, on average, 600,000 infants are born in England and Wales each year, then it can be calculated that a country-wide application of the neonatal care advocated by Dr Hughes-Davies would lead to 2460 more ‘preventable’ early neonatal deaths each year among normally formed liveborn infants over 1 kg than would be the case if the 1978 Southmead standard were adopted instead. Nor does this figure take into account the fact that the Southmead figures were loaded with referred problem cases. In addition, as the late Professor W. C. M. Nixon wrote in 1963: ‘Like an
iceberg, we see only a proportion of the ill results, the deaths. But we must not forget the submerged and larger fraction, the near deaths and the harm which they cause—the long-term handicaps. As to the cost–benefit of prevention, our admittedly amateur calculations suggest that the provision of good newborn care is likely to pay for itself at the very least 20 times over and perhaps 100 times or more.

In conclusion, we should like to make the following points: (1) We warmly support Dr Hughes-Davies's emphasis on the importance of the fundamental principles of keeping small sick infants warm and fed, of nursing them prone, and of handling them as little as possible. (2) We deplore and reject his denial of the benefits of modern intensive monitoring and therapy for infants that require such support. (3) We have some sympathy with his view that a great deal of intensive care as currently practised with inadequate staff and facilities may be counterproductive—although we have even more sympathy with the nurses and doctors who struggle on in spite of the difficulties. (4) Finally, we would agree with Dr Hughes-Davies when he stresses the critical importance of good antenatal and intrapartum care in reducing perinatal mortality.

P. M. Dunn and B. D. Speidel
Department of Child Health,
Southmead Hospital,
Bristol BS10 5NB

Dr Hughes-Davies comments:

The letter from Dr Dunn and Dr Speidel raises some interesting points.

The comparison of very small babies was, as stated, with those born in University College Hospital. I excluded those transferred because we do not know from what population they came. Paradoxically the figures suggest that the transferred babies did at least twice as well as those born on the spot, presumably because the tiny and the weak died before they could be moved; and it may be that this effect favours Southmead too. London has many more immigrants than Salisbury, and some of these babies are likely to be more mature for a given weight than ours; hence the breakdown by gestation in Table 4. I still think the comparison is valid enough to make the point that we have far to go in helping babies of <1000 g.

The Wessex neighbours were Basingstoke, Bournemouth, Dorchester, Portsmouth, Southampton, and Winchester. The first-week figures were not collected by me, but I was allowed to use the totals. Salisbury compared favourably with the others individually, and I am not sure why the comparison is rejected.

I had available only the 4-week national figures sufficiently broken down by weight, and I expected that the table would be read in conjunction with the text. If our monthly figures had been included there would have been little difference, although some babies may