Short term outcome in babies refused perinatal intensive care

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Abstract

Objective—To compare the mortality in babies refused admission to a regional perinatal centre with that in babies accepted for intensive care in the centre.

Design—Retrospective study with group comparison.

Setting—Based at the Royal Maternity Hospital, Belfast, with follow up of patients in all obstetric units in Northern Ireland.

Patients—Requests for transfer of 675 babies to the regional perinatal centre (prenatally and postnatally) were made from hospitals in Northern Ireland between January 1984 and December 1986. In all, 333 babies were refused admission to the centre, and complete data were available for 332 of them. These babies were either admitted to other neonatal intensive care units (261 babies) or remained in hospitals with only special care cots (71 babies).

Main outcome measure—Short term mortality.

Results—Seventy of the 332 babies refused admission to the centre died compared with 51 of the 333 who were admitted. Multivariate analysis based on a logistic model showed a non-significant increase in mortality among babies treated in other intensive care units compared with babies treated in the centre (relative odds 1.2; 95% confidence interval 0.7 to 1.9). The increase in mortality in babies who remained in a special care baby unit, however, was significant (3.5; 1.7 to 7.0). This increase was particularly significant in babies born at <32 weeks' gestation and who weighed less than 1500 g (8.4; 2.5 to 28.1).

Conclusions—The results of the study confirm the benefits of neonatal intensive care and its particular value in improving survival in babies of low birth weight. As the babies were refused admission to the regional perinatal centre because intensive care cots were not available this deficiency should be corrected.

Introduction

Several studies have investigated outcome in babies of low birth weight after transfer either prenatally or postnatally to a regional neonatal intensive care unit and compared it with that in babies born outside the regional centres.1 3 Although such comparisons seem to justify transfer, confounding variables must be taken into account in the statistical analysis.4 A working party of the Royal College of Physicians recently reported a national shortage of intensive care cots.5 As a result of this shortage obstetricians and paediatricians in district maternity units may be unable to secure the admission of all babies to intensive care units. It is therefore imperative to compare survival in babies after transfer with that in babies for whom transfer was requested but refused because of lack of facilities in the regional unit. To date there have been two such studies both restricted to transfer of babies postnatally, which suggested that mortality in infants who are refused transfer is higher than that in those who are transferred.6 7 We studied babies who were referred pre-
Results

During the study there were 675 requests for transfer to the regional centre, 343 of which were refused because intensive care cots were not available. Complete data were obtained for 332 of the babies refused transfer and for all of those accepted for transfer. Seven of the 11 missing charts were from a small urban delivery unit where records were difficult to trace. Of the 332 babies who were refused transfer and for whom complete data were obtained, 261 remained in or were subsequently admitted to other intensive care units, while 71 remained in hospitals that had only special care cots. The most common reasons for requesting transfer prenatally were preterm labour (including preterm rupture of membranes) and pre-eclampsia. Low birth weight and its associated variables were the commonest indications for requesting transfer of neonates (table I).

Fifty one of the 333 babies admitted to the regional centre died (15%) compared with 70 of the 332 babies refused admission (21%). The χ² analysis showed no significant difference in mortality between the two groups (χ² = 3.4; 0.05 < p < 0.10). Even after adjustment for important covariates with the logistic model the difference was not significant (χ² = 3.07; 0.05 < p < 0.10). Of the babies that were not admitted to the centre and who received intensive care in smaller units, 49 (19%) died. Of those who were not admitted to the centre and received only special care, 21 (30%) died; 12 of these 21 babies weighed more than 1500 g and only one died because of a congenital abnormality.

Table II compares the characteristics of the babies in the three study groups. Further analysis indicated that quadratic as well as linear terms in birth weight and gestation were required in the logistic model and that the presence of the respiratory distress syndrome, breech presentation, and the type of initial transfer request (prenatal or postnatal) were the most likely confounding variables. After adjustment for these variables the odds on death relative to babies admitted to the centre were slightly higher for babies refused admission but transferred to other, smaller neonatal intensive care units (1.2%; 95% confidence interval 0.7 to 1.9; p > 0.05). For the babies who were refused intensive care and received only special care the relative odds on death were 3.5 (1.7 to 7.0), indicating a significantly higher mortality (p < 0.001) (fig 1).

A subgroup analysis was performed on babies who weighed less than 1500 g and who were born at <32 weeks’ gestation. Relative to babies admitted to the centre the odds on death were similar for babies refused admission but admitted to other, smaller neonatal intensive care units (1.0; 0.5 to 2.1). In the babies who were refused intensive care and received only special care, the relative odds on death were significantly higher (8.4; 2.5 to 28.1).

Discussion

Only two previous studies (both from the same hospital) have compared the outcome in babies refused admission with those accepted for neonatal intensive care.1 These studies concluded that the babies refused admission had a poorer outcome, but each study had drawbacks in design. The first study considered only
Survey of colourings and preservatives in drugs

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Abstract

Objective—To assess the prevalence of colourings and preservatives in drug formulations in the United Kingdom.

Design—Postal survey.

Participants—All pharmaceutical manufacturers in the United Kingdom were requested to supply data on drug formulations with particular regard to the content of colourings and preservatives.

Main outcome measure—Prevalence in proprietary drugs of colourings or preservatives, or both, that have been implicated in adverse reactions. Computation of a list of formulations of bronchodilators, antihistamines, and antibiotics that are free of such additives.

Results—A total of 118 out of 120 pharmaceutical companies supplied the data requested. In all, 2204 drug formulations were analysed and found to contain 419 different additives, of which 52 were colourings and preservatives that have been implicated in adverse reactions; 930 formulations contained such an additive. Tartrazine was the fourth most commonly occurring colouring, being present in 124 drug formulations.

Conclusion—Many drugs contain additives that help to identify them and prolong their shelf life but are implicated in adverse reactions in some people. Some form of labelling of drug additives would enable these people to avoid drugs containing such additives.

Introduction

Many additives are used in drugs by the pharmaceutical industry for a variety of reasons, including improved identification and stability. Although adverse reactions to drugs have been reported and investigated for many years, adverse reactions to drug additives such as colourings and preservatives have not been reported only for the past 30 years. Some of the colourings and preservatives that are added to drugs are also added to foods, and various adverse reactions have been attributed to them, although the validity of reports has been questioned.1 Colourings, however, have been reported to cause urticaria2-4 and preservatives, such as sulphanilic acid, to cause asthma.5,6 There is little evidence that food or drug additives cause hyperactivity in children, despite popular perceptions and the results of several studies.7,8,9

The prevalence of adverse reactions to food additives...