Asian neonatal mortality in Blackburn

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SUMMARY Neonatal mortality among Asian and non-Asian babies in Blackburn was determined for 1982–84. Though Asian mothers have more low birthweight babies, proportionately fewer babies require intensive care. Preterm delivery and asphyxia were not major factors in neonatal mortality among Asian babies, most deaths being due to lethal congenital malformations.

Perinatal mortality in England has been declining steadily. Concern has been expressed that despite this fall perinatal mortality in babies of mothers born in Pakistan remains much higher. In its report the Social Services Committee says 'We do, however, consider the incidence of perinatal mortality among ethnic minority babies to be a major outstanding problem'.¹ Other groups of workers have expressed similar concern.^{2,3} This study examines births in Blackburn to Asian women to determine their percentage of the total births, the proportion of babies of low and very low birth weight, and the causes of neonatal mortality.

Patients and methods

Information on total births and ethnic origin of the babies was obtained from the statistical unit of the North Western Regional Health Authority (National Child Health System), and deaths were analysed from details of hospital records. Blackburn, Hyndburn, and Ribble Valley Health Authority has a population of 272 000, of which roughly 20 000 are Asian citizens (mostly Pakistani Moslems). Almost all deliveries take place in either the Consultant Unit at Queen's Park Hospital or the three peripheral maternity units. The annual live birth rate has varied from 3931 in 1982 to 3803 in 1984. All babies requiring special care are admitted to the Consultant Unit at Queen's Park Hospital.

By 1978 special care was well established, but babies requiring ventilatory care and intensive care were transferred to the Regional Neonatal Intensive Care Unit. From 1981 intensive care, including long term ventilatory care, has been carried out locally. Asian live births, births requiring ventilatory care, and neonatal deaths have been analysed in detail from 1982–84 to determine the impact of special and

intensive care. The diagnoses of cause of deaths were based on clinical grounds—namely, neural tube defects—at surgery—namely, diaphragmatic hernias—or through an autopsy.

Results

The annual proportion of Asian live births has remained constant (22% in 1982, 22.4% in 1984). In 1982–84, out of a total of 11 558 live births, 2558 were to Asian mothers (22.1%). The Table shows the proportion of Asian and non-Asian births in different weight categories.

The prevalence of low birthweight babies (less than 2500 g) was higher in the Asians (12%) than in the non-Asians (7.7%). This was due, however, to a higher prevalence of 'moderately low birthweight babies' (1500–2500 g) in the Asians (11%) compared with the non-Asians (6.7%). The prevalence of very low birthweight babies (less than 1500 g) was similar in both groups (1%). Although Asian babies require special care and are admitted to the special care unit (25% of all admissions to the unit are Asian babies), they do not make disproportionate demands on intensive care. One particular category of intensive care as defined by the British Paediatric Association and the British Association of Perinatal Paediatrics is assisted ventilation.⁴ Over the years 1982–84 only 0.3% of normally formed Asian babies were ventilated as opposed to 1.1% of normally formed non-Asian babies. In each weight category proportionately less Asian babies required ventilation.

Neonatal mortality in Asian babies over these years is 8.6/1000 compared with 5.4 for non-Asian babies. When one excludes the deaths from lethal congenital malformations, however, the neonatal mortality for Asians of 1.2 is much lower than the 3.4 for non-Asians. The death rate from lethal congenital malformations among Asian babies is 7.4 (non-Asian 2.0). The causes of lethal congenital malformations are varied. Of the 19 deaths, seven were due to central nervous system malformations and four to chromosomal abnormalities, and the rest were scattered among other systems. There was no set pattern among them. Over the years 1982–84 only three normally formed Asian babies have died. Of these two were below 1000 g. One of them was a Chinese baby weighing 700 g and the other was a twin weighing 400 g, the first twin having been

	Weight (g)						Total					
	<1000		1001-1500		1501-2000		2001-2500		> 2501		Total	
	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Live births	31	8	59	18	112	58	223	8308	2251	9000	2558	11 558
% Of total births	0.3	0.3	0.7	0.7	1.2	2.3	8.7	92.3	88	100	100	
Babies ventilated:												
Other than congenital malformations	27	1	40	3	12	2	1	13	1	100	8	108
As % of birthweight group	87.1	12.5	67.8	16.7	10.7	3.5	0.5	0.2	0.04	1.1	0.3	0.9
Deaths	16	3	8	4	5	3	7	18	5	49	22	71
Neonatal mortality/1000	516.1	375	135.6	222.2	44.6	51.7	4.1	31.4	2.2	5.4	8.6	6.1
Deaths: congenital malformations	0	1	0	4	3	3	7	13	4	18	19	37
Congenital malformation mortality/1000	0	125	0	222.2	26.8	51.7	4.1	1.6	1.8	2.0	7.4	3.2
Deaths: other than congenital malformation	16	2	8	0	2	0	0	5	1	31	3	34
Neonatal mortality/1000 for other than congenital malformations	516.1	250	135.6	0	17.9	0	0	0.6	0.4	3.4	1.2	2.9
Death due to asphyxia	0	0	2	0	2	0	0	3	0	7	0	7

Though there were seven deaths due to asphyxia during this period, none of them were among Asian babies.

Clarke and Clayton found increased mortality in Asian babies in Leicestershire not only due to congenital malformations but also due to asphyxia and prematurity.³ Others have recorded high perinatal mortality in Pakistani groups.² Terry *et al* found higher neonatal mortality in Pakistani babies mostly due to congenital malformations.⁵ They also recorded an increased proportion of low birthweight babies, which could have contributed to the higher neonatal mortality.

Our analysis confirms the high prevalence of Asian babies below 2500 g, but we find no increase in the proportion of very low birthweight babies. Low birthweight babies may require special care, but it is the very low birthweight babies who require intensive care and usually contribute most to neonatal mortality. In our unit Asian babies of all weight groups require much less ventilatory support than non-Asian babies. When an Asian baby requires intensive care it is usually because of problems associated with management of congenital malformations rather than respiratory failure associated with preterm delivery. In addition, we found that most Asian babies are dying of lethal congenital malformations and that preterm delivery or asphyxia do not significantly contribute to their neonatal mortality. This has obvious implications when planning services for ethnic minorities. Recently, the Department of Health and Social Services set up the Asian Mother and Baby Project, indicating that 'Ministers have expressed concern about the health of the Asian mother and her baby and in particular the perinatal mortality in some Asian communities'. The Asian Mother and Baby Project is directed towards increasing the uptake of antenatal services among Asian mothers. Resources diverted towards these goals will not affect the neonatal mortality in Asian babies. The causes of congenital malformations in Asian babies are not known. I agree with Terry *et al*⁵ that increasing maternal age and consanguinity may contribute to the high incidence of lethal congenital malformations, but other environmental factors, including diet and 'culture stress', cannot be excluded. If resources are to be directed towards reducing neonatal mortality in ethnic minorities then they need to be planned on evidence produced by sound

research. This will require a multicentre study to provide sufficiently large numbers of births. Priority of the Asian mother may lie in preconceptual clinics and genetic counselling. A long term solution may lie in the establishment of Pakistani Moslem women genetic counsellors as is being done in Bradford for families with thalassaemia.

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Neonatal tuberculosis

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SUMMARY Tuberculosis rarely presents in the neonatal period. Though treatable, it may be fatal despite modern treatment. The diagnosis of congenital tuberculosis should be considered in any neonate with pneumonia that fails to respond to conventional treatment, particularly in a child from an ethnic or socioeconomic environment where tuberculosis is prevalent.

Congenital tuberculosis is rarely reported¹ and is unlikely to be considered in areas where the prevalence of adult tuberculosis is low. A case of congenital tuberculosis is described.

Case report

A boy weighing 1380 g was born vaginally at 28 weeks' gestation to a 21 year old primigravida. Both parents were Indian, but neither had been to the Indian subcontinent for over two years. No maternal illness had been recorded during pregnancy, although a history of cough and night sweats was subsequently elicited. Immediately after delivery the infant was transferred to the special care baby unit and nursed in an incubator. He remained well until 22 days of age, when he had a number of short apnoeic episodes, became tachypnoeic, and exhibited signs of a patent ductus arteriosus. A chest x ray film showed cardiomegaly with bronchopneumonia, and a full infection screen proved non-contributory. Treatment with parenteral penicillin and gentamicin was started and the infant transferred to a regional paediatric unit, where minimal

hepatomegaly was noted and echocardiographic confirmation of a patent ductus arteriosus made.

Fig. 1 Chest x ray film showing widespread bronchopneumonia.