Ethnic differences in perinatal mortality

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Summary

Of the 3869 normally formed, singleton deliveries in Dudley Road Hospital in 1979, 3690 were to either European (1644), Indian (1087), Pakistani (556) or West Indian (403) mothers. The perinatal mortality rates in the Indian group with birth weights of 2000–2999 g and 3000–3999 g were higher than in any of the other ethnic groups (11.5/1000 and 6.7/1000 respectively).

Introduction

Perinatal epidemiology has been recognized as a useful tool in the identification of obstetrical risk factors. Most workers believe that the identification of these factors has helped to reduce the perinatal mortality rate and improve the 'quality' of infants born. Little work has been done on the effect of the ethnic origin of the mother in the absence of differing obstetric and paediatric care although recently ethnic differences have emerged as an apparently important factor in perinatal mortality (Terry, Condie and Settatee, 1980).

Dudley Road Hospital, Birmingham, serves an inner-city, multi-racial population. Birth-weight-specific perinatal mortality rates were analysed in the main ethnic groups attending this Department.

Patients and methods

Information on maternal ethnic origin, birth

weight, perinatal mortality, multiple births and congenital malformations was obtained from the labour ward register. There was a total of 4026 deliveries in 1979. All multiple births, perinatal deaths and infants with major congenital abnormalities were excluded from the analysis.

Results

Of the 3869 deliveries in the series, 1644 (42%) were European, 1087 (28%) Indian, 556 (14%) Pakistani and 403 (10%) West Indian. There were 54 corrected perinatal deaths; 14 were European, 23 Indian, 7 Pakistani and 6 West Indian. The perinatal mortality rates in the <1000 g births were uniformly high in all the ethnic groups. In the 1000–1999 g births the perinatal mortality rate was higher in the Pakistani group (545/1000) than in the other ethnic groups. In the 2000–2999 g and 3000–3999 g births the perinatal mortality rate in the Indian ethnic group, at 11.5/1000 and 6.7/1000, was appreciably higher than in any of the other ethnic groups (Table 1).

Discussion

Differences in the birth-weight-specific perinatal mortality rates in different ethnic groups have been observed by other workers. An example is the observation of low birth weight-specific perinatal mortality rates in American blacks as compared with whites (National Center for Health Statistics,

TABLE 1. Ethnic distribution of birth-weight-specific perinatal mortality rates/1000 births (Figures in parentheses represent number of singleton deliveries)

	Birth weight (g)				
	< 1000	1000–1999	2000–2999	3000–3999	> 3999
Indian (1087)	750	266	11.5	6.7	0
Pakistani (556)	1000	545	0	0	0
West Indian (403)	1000	222	0	0	0
European (1644)	1000	286	2.4	1.9	0

1972; North and MacDonald, 1977). This observation is not surprising if American blacks, for some genetic reason, produce smaller fetuses than do the white group. It is not clear why, as in this study, the Indian ethnic group, who tend to produce smaller fetuses (Terry *et al.*, 1980), have a higher perinatal mortality rate in the high birth-weight groups. Environmental factors such as dietary deficiencies may be contributory.

References

- NATIONAL CENTER FOR HEALTH STATISTICS (1972) A study of infant mortality from linked records, Rockville, Md. *Vital Health Statistics Series 20, No. 12*.
- NORTH, A.F. & MACDONALD, H.M. (1977) Why are neonatal mortality rates lower in small black infants than in white infants with similar birth weight? *Journal of Pediatrics*, **90**, 809.
- TERRY, P.B., CONDIE, R.G. & SETTATREE, R.S. (1980) Analysis of ethnic differences in perinatal statistics. *British Medical Journal*, **2**, 1307.