

Stillbirths

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The perinatal mortality rate groups together stillbirths and live born first week neonatal deaths and, has been used as a sensitive indicator of prevailing socio-economic conditions and levels of obstetric and neonatal care at local, national and international levels. In Singapore, stillbirth and perinatal statistics include deaths which occurred in pregnancies advanced beyond 28 completed weeks of amenorrhoea. While this is 4 weeks adrift of figures from many developed countries (the United Kingdom uses a lower limit of 24 weeks of amenorrhoea), stillbirth and perinatal rates in this country continue to compare well with the best in the world. Singapore's national statistics show that the stillbirth rates fell from 14.1 per thousand in 1960 to 6.4 per thousand in 1980 and 2.9 per thousand in 1995. Respective perinatal mortality rates were 27.9, 13.4 and 4.3⁽¹⁾. Such figures attest to improvements in education and socio-economic situation. Between 1986 and 1996, literacy rates rose from 86.6% to 92.2% and per capita gross national product per annum increased from \$14,711 to \$37,035. Advances in obstetric and neonatal care have also contributed, and this is reflected in the increase in the doctor to patient ratio. There were 11 doctors per 10,000 resident population in 1986 and 15 per 10,000 in 1996.

However, definitions for liveborns and stillborns vary enormously and therefore restrict direct comparisons between nations. In the United Kingdom, the lower limit of viability is 24 completed weeks of gestation. The World Health Organization (WHO) recommends that national statistics should include all fetuses weighing at least 1,000g at birth, and where feasible, should be extended to include also those weighing between 500g-1,000g. This is not unreasonable given that WHO limits abortion to the expulsion or extraction of fetuses which weigh 500g or less. Different to national criteria, the Department of Obstetrics and Gynaecology, National University Hospital (NUH) records perinatal mortality rates which include all babies which weighed more than 1,000g at birth. It is therefore not surprising that the perinatal mortality rates reported from this institution have been generally higher than reported nationally.

Survival rates for very low birth weight babies have improved dramatically in the developed world. This is true also of Singapore where facilities for intensive neonatal care have received generous funding and support and where neonatology has

long been established as a recognised sub-speciality. Babies weighing between 900-1,000g at birth have a ~80% chance prolonged survival, while those weighing between 700g-800g have a survival expectancy of the order of 70%. These improvements have contributed to the fall in the >1,000g perinatal mortality rate - from 9.7 in 1986 to 6.9 in 1990 and to 5.5 per thousand in 1995.

The authors of a paper "Optimising Management of Stillbirths in Modern Singapore" (pg 317) in this issue of the Singapore Medical Journal, reviewed 136 stillbirths at the Kandang Kerbau Hospital between 1993 and 1994. First week deaths were not included and, in keeping with the nationally accepted definition, only babies more than 28 completed weeks of gestation were included in the study.

Perinatal mortality rates embrace stillbirths and live born first week neonatal deaths since many of the causes of death are the same in each group and it may have been merely fortuitous that the fetus was born alive only to die soon thereafter. However, the study did not differentiate between fresh and macerated stillbirths where there may be important differences. Possibly, that the former are more likely to have correlations with obstetric management while the latter may find association with congenital anomalies. It was not within the purview of this study to include livebirths.

The study showed a significantly higher stillbirth rate in Malays as compared to Chinese, but did not attempt to identify different causes of death, if any, between the two racial groups. This information would have been of value in improving perinatal outcome in Malays. However, part of the more recent declines in the stillbirth (and perinatal mortality) rate may be attributed to elective abortions when the fetus was found to be chromosomally abnormal or congenitally malformed. Accurate data on acceptance rates of prenatal diagnostic procedures and termination of malformed pregnancies by the different racial groups is not available. The study reported that the overall post-mortem rate was 39.7% while that in Malays was just 4.5%. This may be taken to support the view that termination of malformed pregnancies finds poor acceptance amongst the largely Muslim Malay community, and could well translate into higher stillbirth and perinatal mortality rates.

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Despite ready accessibility to tertiary levels of obstetric and neonatal care, the authors also showed that the precise cause(s) of death in more than a third of stillbirths could not be determined and made a strong plea for higher rates of post-mortem examination. This must be supported since more precise answers will go a long way in determining solutions to improve reproductive outcome. Singapore is now a developed nation with enviable socio-economic and healthcare statistics which parallel some of the best in the world. Therefore,

it would seem appropriate to consider revision of national definitions for stillbirths and perinatal mortality, to bring these in line with those of the developed world.

REFERENCES

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