

Perinatal Mortality at Qateef Central Hospital

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ABSTRACT

A retrospective study was carried out on the perinatal mortality at Qateef Central Hospital during the two-year period from January 1989 to December 1990. The aim of this study was to establish the perinatal mortality for this region to serve as a base line for further studies as well as a parameter for improving our antenatal and neonatal services. During this period, the number of total births increased from 1,152 to 2,259. The perinatal mortality dropped from 29.5 per 1000 total births in 1989 to 21.2 in 1990. The still-birth rate and early neonatal rate were equal at 14.7 per 1000 total births for the first year of the study period, and 14.1 and 7.08 per 1000 total births, for the second year respectively. Severe prematurity, birth asphyxia and congenital anomalies were the most common causes of perinatal deaths. Improved antenatal supervision and monitoring with early detection of foetal and maternal complications, coupled with better neonatal service can reduce the perinatal mortality.

Perinatal mortality is an index upon which we identify obstetrical and early neonatal problems. The perinatal mortality in the Kingdom has improved greatly over the past decade,¹⁻³ though it remains high.⁴ The perinatal mortality (stillbirth and early neonatal death rate) is a valuable parameter of both maternal and perinatal care.⁵ We want to highlight some of the causes of perinatal mortality and how it may be reduced.

METHODS

All the babies born at Qateef Central Hospital between 1 January 1989 and 31 December 1990 were included in the study. For the purpose of the study, International Federation of Obstetric and Gynecology and the World Health Organization recommended definitions were used.⁶⁻¹⁰ All newborns and still-birth over 22 weeks of gestation were included, Gestational ages were calculated

from the menstrual history and sonographic assessment of foetal biparietal diameter and femoral length. Still-birth was defined as death prior to delivery and no indication of life (breathing, pulse etc). Since autopsy is not allowed in Saudi Arabia, causes of death were diagnosed from clinical observation, hence mortality was based on broad categories. Prematurity was defined as gestational age less than 37 weeks. For the purpose of the study, the charts of all newborns and their mothers were reviewed.

RESULTS

The total number of births at Qateef Central Hospital was 1,152 and 2,259 respectively. During the first year of the study, the number of still-births and early neonatal deaths was 34, yielding a perinatal mortality of 29.5 per 1000 total births. In the second year, the number was 48 and perinatal mortality 21.2 per 1000 total births as shown in Table 1.

Table 2 shows the time of death in relation to labour. During the first year, 11 died antepartum, 6 intrapartum and 17 postpartum. While in the second year, 22 died antepartum, 10 intrapartum and 16 postpartum. It is clear

Table 1
Total births, early neonatal deaths, still-births and perinatal mortality during the study period

	1989	1990
Total births	1152	2259
Still-births	17	32
Early neonatal deaths	17	16
Perinatal mortality (per 1000 total births)	29.5	21.2

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Table 2
Time of death in relation to labour

	1989	1990
Antepartum	11	22
Intrapartum	6	10
Postpartum	17	16

that at least 50% of the deaths has occurred before or during delivery.

Table 3 shows that severe prematurity, birth asphyxia and congenital anomalies were the most common causes of early neonatal deaths during the study period.

Table 3
Causes of death during early neonatal period

Cause	No. of death
Severe prematurity	19
Birth asphyxia	8
Congenital anomalies*	5

* 2 patients had anencephaly, 1 had diaphragmatic hernia, 1 canal regression syndrome, and 1 multiple congenital anomalies

DISCUSSION

Qateef Central Hospital, a 400-bed institution, is the main referral hospital for the residents of Qateef Area; its Obstetric and Neonatal Intensive Care unit started to function at the beginning of 1989. As we can see that the number of deliveries has increased in 1990, as more pregnant women were being referred for antenatal follow-up. For this reason, we decided to establish the perinatal mortality for this region to serve as a base line for further studies and as an index upon which we improve our labour and neonatal services. On examination of the hospital records, we have observed a drop in perinatal mortality, from 29.5 to 21.2 per 1000 live births, which is as expected; because as time goes on, our experience in defining the main antenatal and intranatal problems increases and our knowledge in dealing with them also increases thus resulting in lower perinatal mortality. Our figures are higher than the figures reported from other regions in the Kingdom^{11,12} since these regions had a longer experience than us.

A high proportion of perinatal deaths occurs in labour, mostly due to severe prematurity and birth asphyxia. So better obstetric monitoring during labour coupled with skilled delivery may reduce the risk of perinatal death. In addition, good neonatal intensive care should also play a role in decreasing the mortality and morbidity.¹³ We have also observed that more than 50% of our perinatal deaths were due to antepartum and intrapartum causes. We did not look at the maternal factors in details, which we think are important especially in an area where consanguinity rate is very high, so are sickle cell anaemia and diabetes.

CONCLUSION

Our data clearly shows that perinatal mortality in Qateef region is decreasing but remains high compared to those of other regions in the Kingdom. Despite the use of pharmacological agents to stop premature labour, the percentage of perinatal deaths due to severe prematurity is still high. We believe that improved antenatal supervision and monitoring with early detection of foetal and maternal complications, coupled with better neonatal service will reduce the perinatal mortality.

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CONCLUSION

Our data clearly show that perinatal mortality in Qatuf region is decreasing but remains high compared to those of other regions in the Kingdom. Despite the use of pharmacological agents to stop premature labour, the percentage of perinatal deaths due to severe prematurity is still high. We believe that improved neonatal supervision and monitoring with early detection of foetal and maternal complications coupled with better neonatal services will reduce the perinatal mortality.

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Table 3 shows that severe prematurity, birth asphyxia and congenital anomalies were the most common causes of early neonatal deaths during the study period.

Table 3
Causes of death during early neonatal period

Cause	No. of deaths
Severe prematurity	19
Birth asphyxia	5
Congenital anomalies*	2

* 2 patients had asphyxia; 1 had dysphagmatic hernia; 1 cardiac septation syndrome; and 1 multiple congenital anomalies.

DISCUSSION

Qatuf Central Hospital, a 400-bed institution, is the main referral hospital for the residents of Qatuf Area; its Obstetric and Neonatal Intensive Care unit started to function at the beginning of 1989. As we can see that the number of deliveries has increased in 1990, almost pregnant women were being referred for antenatal follow-up. For this reason, we decided to establish the perinatal mortality for this region to serve as a base line for further studies and as an index upon which we improve our labour and neonatal services. On examination of the hospital records, we have observed a drop in perinatal mortality, from 29.2 to 21.2 per 1000 live births, which is as expected because as time goes on, our experience in defining the main maternal and neonatal problems increases and our knowledge in dealing with them also increases thus resulting in lower perinatal mortality. Our figures are higher than the figures reported from other regions in the Kingdom^{11,12} since these regions had a longer experience than us.