

Predictors of neonatal mortality in the intensive care unit in Abha, Kingdom of Saudi Arabia

To the Editor

We read the study by Arafa and Al-Shehri¹ with interest and appreciated the authors' effort to publish such work. In this study, there are certain areas that need clarification. The 3 common illnesses reported are actually only 2, respiratory distress syndrome is a part of the respiratory problem. The neonatal period is up to 28 days, in this study 3.2% deaths are after the neonatal period. So the revised neonatal mortality will be less than reported in this study. Ohud hospital is a tertiary care hospital in Medina Al-Munawara City, Kingdom of Saudi Arabia (KSA). It has 30-bed capacity for neonatal intensive care unit (NICU). This hospital provides obstetric and neonatal services both for the local population and the referrals from other hospitals in Medina Al-Munawara area. This is the second Ministry of Health (MOH) hospital in the city that provides neonatal care. In a retrospective study, for the years 2003 and 2003, a total number of neonates admitted in the NICU was 339 and 325, a total of 664. The total numbers of deaths were 18 and 22, a total of 40 (6%). The main cause of death was prematurity and the related problems such as respiratory distress syndrome, intra ventricular hemorrhage, pulmonary hemorrhage, and sepsis. Fifty-five percent of the babies died in the first week of life.

We agree with the authors that there is a great variation in neonatal mortality between NICU's. The Civil Hospital, Khamis Mushyat is near Abha, KSA, where the author (Ghulam Nabi) worked, in unpublished data, the retrospective 7 years study of neonatal mortality was 17%, 27%, 24%, 12.5%, 11.5%, 9.9%, and 6.7% in the year 1405 up to 1411 Hijra. The World Health Organization estimates that 5 million children die within the first month of life each year and that nearly all these deaths occur in developing countries. Most of these deaths are caused by infectious diseases, pregnancy and delivery related complications including preterm births, perinatal asphyxia and birth trauma. Low birth weight is one of the principal contributors to neonatal mortality and morbidity worldwide and accounts for up to 70% of neonatal deaths in some countries. In developed countries, most low birth weight babies (more than 60%) are due to prematurity.² In one of the studies in the United States of America, it was observed that neonatal mortality pattern has become highly dependent on infants with gestational ages that approach the

second trimester. Preventing neonatal mortality by enhancing the care of the pregnant ladies, in addition to improving the health status of the ladies.³ Yasmin et al,⁴ from Bangladesh reports high neonatal mortality and the major cause was low birth weight. In their study, 84% neonates died in the first week of life.⁴ Luo et al⁵ from Sweden, reported that neonatal mortality was more in preterm babies especially born during the night.⁵ The reasons for low neonatal mortality in our study could be: 1. The majority of the pregnant women attended the antenatal clinic and the deliveries were conducted in the hospital. 2. Adequate number of beds available for the admission in the NICU. 3. Adequate number of trained staff (including doctors and nurses), equipment and drugs. 4. Strict aseptic precautions in collaboration with the infection control team of the hospital. 5. Early use of expressed breast milk, breast feeding and earlier maternal involvement for the care of the baby. 6. Three tiers medical care system in this country (primary health centers, secondary and tertiary care hospitals). 7. Rapid transport facilities for the transport of the sick patients. 8. Regular perinatal mortality and morbidity meeting between obstetrics and NICU staff to discuss mortality and morbidity in our hospital. 9. Support from continuous medical education program. 10. Regular neonatology club meetings in Medina Al-Munawarrar region, where the physicians who handle the new born babies both in the MOH and private hospitals, discuss the problems they are facing to carry out the neonatal care, as well as the ways and means to improve the medical care in neonatal population.

In conclusion, there is a need to publish such studies from the various regions of this country to ascertain the magnitude of the problem. Thus, the policies can be designed to lower the neonatal mortality in general, perinatal mortality in particular and to improve neonatal service.

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**Ghulam Nabi
Mohd A. Karim**
Ohud Hospital

*PO Box 6313, Medina Al-Munawara
Kingdom of Saudi Arabia*

Reply from the Author

We would like to thank Dr. Nabi and Dr. Karim for their comments on our published paper.

As reported in our study, the total number of deaths were 62, of which 2 cases occurred after the

28th day were excluded. As you would notice the total number of deaths mentioned were 29 + 9 + 20 totaled to 58 and not 68, which were the most prominent figures of mortality that occurred during the study period, with the remaining numbers distributed throughout the whole period.

Mostafa A. Arafa
Mohammed Al-Shehri
College of Medicine
King Khalid University
Abha
Kingdom of Saudi Arabia

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