

Two years experience of neonatal services in Kathmandu University Teaching Hospital, B&B hospital

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Abstract

Objective: To know the profile of newborns and to study the association between services provided by the specialists and the birth outcome.

Methods: The study included 227 women who gave birth during 1/1/04 to 31/12/06. All deliveries were conducted and attended by Obstetrician and Gynaecologist and Pediatrician respectively. Maternal and Neonatal data were recorded on the standard proforma.

Results: There were 227 babies during the study period. Mean birth weight was 3 kg. Low birth weight (LBW) was found in 9% of the babies only and most of them were born at term. There were 5% preterm, 4% small for gestation (SGA) and 7% large for gestation (LGA) babies. 8% meconium-stained babies were uneventful. All the mothers had antenatal checkups (ANC) and their education was above secondary education and college graduate. The socio-economic background was quite good. 97% of mothers had more than 4 antenatal checkup visits. There were 60% of high-risk cases. There were 53% normal vaginal deliveries, 40% caesarean sections and 7% forceps deliveries. There were two neonatal deaths.

Conclusions: The mean birth weight is good and the LBW rate is also very low in the study. This reflects better health, nutritional, educational status of pregnant women and antenatal care they received during the pregnancy. There were only two neonatal deaths, which may correlate with better specialist's care being provided. This study contributes to the understanding of the constant growth of caesarean section and more studies are recommended for future benefits and indications of caesarean procedures.

Keywords: New born, birth weight, delivery, specialist, record keeping

Introduction

Kathmandu University Teaching Hospital (KUTH), B&B is a tertiary level referral hospital for different specialties in Nepal. After the establishment of KUTH, Department of Paediatrics was established and different Paediatrics services along with Neonatal services have been started since January 2004. However, KUTH B&B is one of the few institutions where conduct of all deliveries and attendance are provided by specialists. Specialists care facilities for Nepal's annual births are not only limited but also are beyond the reach as about 90% of babies are born at home.

The Department of Paediatrics has now the experiences of more than 2 years. In the background of this, the present study was undertaken to know the profile of newborns and also birth outcome and its association in this newly built public-private partnership teaching hospital.

Materials and methods

The study included 227 women who gave birth during 1/1/04 to 31/12/06. All deliveries were conducted by specialist Obstetrician and Gynaecologist were attended by Pediatrician. Maternal and Neonatal data were recorded on the standard proforma meticulously with their consent. Birth weight was

taken at birth without clothes on using calibrated electronic weighing machine. The standard intrauterine growth chart was used for classifying babies for low birth weight and small for gestational age.

Results

The study consisted of 227 women who gave birth to 110 (48%) males and 117 (52%) females. Majority (90%) of the babies were weighing equal to or more than 2500 grams (Fig 1). Low birth weight was seen in 21 (9%) babies and most of them were born at term. There were 210 (92%) full term babies, 10 (5%) pre-term babies and 7 (3%) post-term babies. Small for gestation (SGA) was found in 9 (4%) babies and all were Full-term small for gestation (FT, SGA). The mean birth weight was 3 kg.

All the mothers had antenatal checkups (ANC). 220 (97%) mothers had more than 4 ANC visits and 7 (3%) mothers had 2 ANC visits only. Majority (187=83%) of the mothers were in the age group between 20-30 years. There were 120 (53%) normal vaginal deliveries, 92 (40%) caesarean sections and 15 (7%) forceps delivery as shown in the figure 2. 215 (95%) and 12 (5%) babies were born by vertex presentation and breech presentation. There were 108(47.5%) primiparous, 109(48%) multiparous and 10(4.5%) grandmultiparous women.

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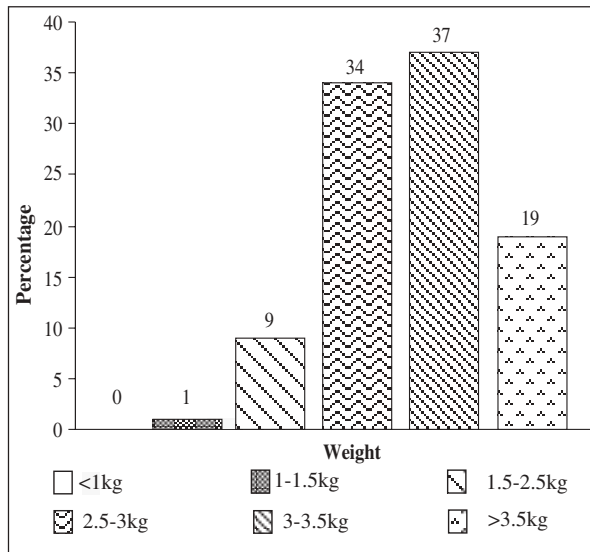


Figure 1: Birth weight of the babies

Six (3%) babies had mild perinatal asphyxia and had uneventful recovery. There were 2 babies born with cleft lip and palate. One baby was born with left sided deformed ear with absent external auditory meatus and anotia. There were only 2 neonatal deaths. One little baby died of fulminant neonatal sepsis and the other died due to consequences of congenital hydrocephalus; both of them were premature and LBW. There was one case of infant of diabetic mother. 19 (8%) babies born with meconium stained liquor were vigorous and none of them developed meconium aspiration syndrome.

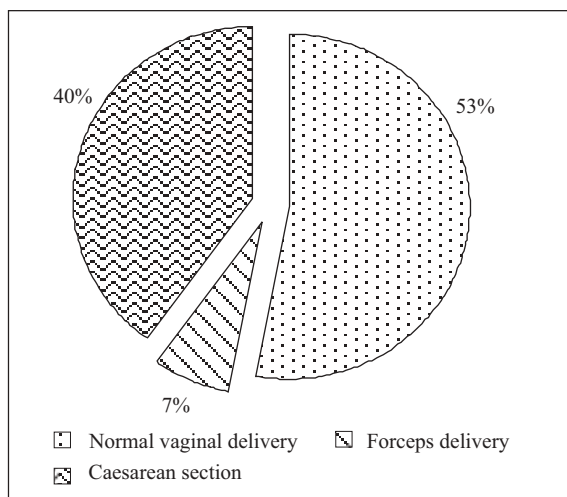


Figure 2: Types of deliveries

Discussion

The study was undertaken to give a glimpse of neonatal service in a newly built public-private partnership teaching Hospital where all deliveries were attended by specialist pediatrician. Though small sample size was the limitation of the study, certain inferences can be drawn.

Low birth weight defined as a birth weight less than 2500gm remains a significant public health problem in many parts of the world and is associated with range of both short and long term adverse consequences. In the study, the LBW rate is low (9%) and most of them were born at term. This correlates well with the mother's health, nutrition, better educational status of pregnant women, antenatal care they received during the pregnancy and their socioeconomic status.

Tracy and associates¹ found that lower hospital volume is not associated with adverse birth outcomes. Similar is the experience of our study where there were only two neonatal deaths because of congenital hydrocephalus and fulminant neonatal sepsis. Our study reveals comparatively high caesarean rate. This high rate may draw concern; however, this rate of caesarian section is justified as fetal distress, malpresentations, big baby, placenta praevia and pregnancy with two previous caesarean sections were the main indications in our study. High proportion of high risk cases (60%) coming to this hospital for safe delivery by the obstetricians of choice may be the main reason of high rates of caesarian section.

Parazzini and associates² found caesarean section rates rose steadily with maternal age, being about three times higher in women aged 40 years or more than in teen-agers. Maternal education was directly associated with caesarean section rates: Compared with women with only primary school education, those with college education reported about 40% higher rate of caesarean section. This determinant is also found in our study where majority of our mothers were college educated and from good socioeconomic background.

Hanvoravongchai and associates⁶ found certain other factors involved in an increasing caesarean section rate, like: Maternal age, multiparity, previous caesarean section, patient choice (e.g. for fear of vaginal delivery).

Conclusion

The mean birth weight is good and the LBW rate is also very low in the study. This reflects better health, nutritional, educational status of pregnant women and antenatal care

they received during the pregnancy. Also there were only two neonatal deaths, which may correlate with better specialist's care being provided. However, despite the limitation of the study being a small sample size, it emphasizes the importance of good and genuine record keeping that would provide insight to neonatal and obstetrics services. This study contributes to the understanding of the constant growth of caesarean section and would lead us to investigate caesarean section in different hospitals in Nepal. Thus more studies are recommended, not only from medical but multi-disciplinary perspectives, for e.g.: social, anthropological, legal and ethical studies are required for future benefits and indications of caesarean procedures.

Keeping meticulous records of patients attending the hospital is the effective way of documenting services provided by the doctors and the hospital.

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