ABSTRACT

Neonatal sepsis is one of the major contributory factors that cause neonatal morbidity and mortality. As very little is known about the risk factors for neonatal sepsis the present study was carried out to determine the risk factors for neonatal sepsis and its association on maternal post partum depression. It also describes the maternal satisfaction regarding the neonatal and maternal care received through government health services and the adherence of infection control standards by health care workers in the hospital setup.

The study was carried out in the District of Gampaha in Sri Lanka during the period of August 2010 to January 2011.

A case control study to determine the risk factors for neonatal sepsis was conducted among the mothers of diagnosed neonatal sepsis babies and mothers of non sepsis babies. A sample of 240 cases and 240 controls were enrolled. The cases were recruited according to the clinical features of WHO strategy in Integrated Management of Childhood Illness. The information was gathered from the interviewer administered questionnaire and by the data extraction sheets. To find out risk factors for neonatal sepsis and to control confounders multiple logistic regression analysis was applied. The results were expressed as Odds ratios and their 95% confidence intervals.

A descriptive cross sectional study design was used to assess the maternal post partum depression due to neonatal sepsis of their newborn. The study instruments were self administered validated Sinhala version of Edinburg Postpartum Depression Scale and the interviewer administered questionnaire.

Maternal satisfaction regarding neonatal care and maternal care received through government health services were assessed by using a 20 item satisfaction scale among the mothers of sepsis neonates.

The adherence to infection control standards by health care workers in selected procedures carried out in labour rooms, neonatal intensive care units, postnatal wards and operation theatres has been observed directly according to the check lists. Designs of buildings and physical facilities were observed in the same units according to the check lists relevant to infection control guide lines.

The maternal risk factors for neonatal sepsis were registration of pregnancy in the antenatal clinic after eight weeks of gestation (OR=1.91;95% CI: 1.07-3.44); total antenatal clinic visits ≤4 (OR=7.18; 95% CI: 2.10-24.49); having a bad obstetric history of mothers namely abortions, still births and early neonatal deaths (OR=6.78; 95% CI: 3.21-14.32); history of maternal fever during the last one week of delivery (OR=2.74; 95% CI: 1.25-6.02); dribbling more than 18 hours before delivery of neonate (OR=10.00; 95% CI: 2.12-47.44); total number of vaginal examination >3 times before delivery of neonates (OR=3.28; 95% CI: 2.10-24.49); meconium stained amniotic fluid when delivering the neonate (OR=10.57; 95% CI:3.75-29.74); and mode of delivery by caesarean section, forceps or vacuum (OR=2.33; 95% CI=1.40-3.86). The neonatal risk factors were time of birth of the neonate between 4 pm to 8 am of following day. (OR=2.12; 95% CI: 1.29-3.47), being a male neonate (OR=1.74; 95% CI: 1.09-2.78.44) and birth weight < 2500g (OR=5.17; 95% CI: 2.79-9.57).

The post partum depression among mothers of sepsis neonates was 78% whereas among controls were 28%. Neonatal sepsis was a risk factor (OR=14; 95% CI: 8.6-22.8) for maternal post partum depression.

The overall maternal satisfaction regarding the received neonatal care was 90% and maternal care was 84.6%. The diet and drinking water provided from the hospital were taken only by 6.7% and 8.3 % of mothers respectively.

Out of observed procedures for infection control standards the compliance of hand washing among the labour room staff, neonatal intensive care units and post natal wards were 57.1%, 80% and 82% respectively.

Conclusions and Recommendations

Eight maternal factors and three neonatal factors were identified as risk factors for neonatal sepsis. Among those, six of the maternal factors and two of the neonatal factors were modifiable. Therefore preventive strategies should be contemplated with relevant authorities. Post partum depression was very high (78%) among the mothers of sepsis neonates. It is extremely crucial to arrange screening for postpartum depression and counselling sessions while in the hospital for all mothers of neonates with neonatal sepsis. Although the overall satisfaction of care was satisfactory it is needed to pay attention on deficient areas like sanitary facilities and communication skills. It is of importance to pay regular attention to the adherence of infection control

standards among all categories of health care workers and carry out regular in-service training programmes regarding this need.

It is advisable to establish routine clinical audits to improve the services and share experiences to minimize the neonatal infections and other adverse outcomes.