

Predictors of poor neonatal outcome in babies born with meconium stained liquor

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Introduction

Meconium Aspiration Syndrome (MAS) continues to be a threat to many newborns throughout the world with a case fatality rate of 5% (as much as 40%), in addition to short and long term pulmonary and neurodevelopmental sequelae. India has the unfortunate distinction of claiming more than a quarter of the total newborn deaths in the world. In resource poor countries where modern electronic gadgets for fetal monitoring are not available, it is difficult to predict the fetal outcome. Therefore, this study is planned to highlight the antenatal, intranatal factors responsible for MSL and markers for early fetal mortality and morbidity. With this knowledge, we provide an approach to enhance health outcomes among neonates by early enactment.

Methods

Prospective Study was conducted including 100 babies born with meconium stained amniotic fluid who are admitted in NICU and with mother in PNC ward. Babies with congenital abnormalities were excluded. Detail history of babies and mother with MSAF noted with emphasis on antepartum and intrapartum risk factors and factors like need of resuscitation, need for NICU admission, consistency of meconium (thick, thin and moderate) etc.

Results

During the study period of 2 months, there were 1113 live births, out of which 100 babies were born with MSAF. Thus, making the incidence of MSAF 8.98%. Out of 100, 24 babies were admitted to NICU and the mean duration of NICU stay was 4 days. Majority of babies were delivered through thin MSL (44%) followed by thick (35%) and moderate (21%). Most common indication for NICU admission was birth asphyxia (16%) and MAS (6%). Total number of deaths were 9 and all these babies had thick meconium with severe birth asphyxia. Out of these 9 babies, 2 had septicemia with DIC and 1 had NHI. There were 55 male babies. Ninety-one babies were more than 37 weeks of gestational age and 57 had birth weight over 2.5 Kg. Nineteen babies were non-vigorous requiring tracheal suctioning and positive pressure ventilation at birth. Common mode of delivery was emergency Cesarean in 83% of patients. Common maternal and fetal risk factors were fetal distress (30%) followed by Oligohydramnios (30%), Pregnancy induced hypertension (24%), anemia (14%), severe anemia (5%), Antepartum hemorrhage (4%) and Antepartum eclampsia (4%).

Conclusion

Oligohydramnios, PIH, anemia and fetal distress were common antenatal and intranatal factors associated with MSAF. Major morbidity and indication for NICU admission was Birth asphyxia and non-vigorous babies. Mortality rate was 9% which is commonly associated with thick meconium and severe birth asphyxia.