

NEONATAL OUTCOME AFTER MECONIUM STAINED AMNIOTIC FLUID

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SUMMARY

Meconium passage in utero is considered a serious neonatal disorder causing morbidity and mortality. The present study reports the experience with Meconium Stained Amniotic Fluid (MSAF) and the neonatal outcome consecutively over a one year period. 174 babies out of 2890 deliveries were meconium stained at birth (6.02%). Passage of thick and thin meconium was seen 40.8% and 59.2% respectively. Thick meconium carried a increased risk of neonatal asphyxia, Meconium Aspiration Syndrome (MAS) and neonatal mortality. Combined obstetric and pediatric approach is recommended to reduce MAS and its complications.

INTRODUCTION

Meconium aspiration is a significant cause of neonatal morbidity and mortality. Although Meconium stained amniotic fluid (MSAF) and Meconium Aspiration Syndrome (MAS) are common neonatal problems, the ideal management of these babies at birth continues to be a subject of diverse opinions (Wiswell, 1990). Herewith we report our experience with MSAF and the relationship between the nature of Meconium (thin and thick) and the neonatal outcome.

MATERIAL AND METHODS

This study was conducted prospectively over a period of one year from Oct. '90 to Sept. '91 in the Neonatal Unit, Medical College, Baroda. The babies born with MSAF in this period were the subjects of the study. The maternal details included record of antenatal care, parity, and any associate obstetric problems. The babies with breech presentation and still births were excluded from this study.

A thorough oropharyngeal suction was performed on the delivery of baby's head. This was followed by laryngoscopy and endotracheal suction of Meconium. Reintubation and suction was repeated if

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Accepted for Publication on 08.09.1993.

had MSAF. The birth weight was 2430 gm \pm 174 (Mean \pm SD). 161 (92.5%) babies were between 37 to 41 weeks while 13 babies were between 33 to 36 weeks of gestation. 119 mothers (68.4%) were unbooked and had not taken any antenatal care before the delivery. Meconium stained amniotic fluid and associated maternal risk factors are shown in Table I. The patient data related to MSAF is shown in the Table II. Complications like PFC or massive pulmonary air leaks were not observed in the present study. Out of 40 babies with MAS there were 6 deaths, all in the babies with thick MSAF with Apgar scores of less than 3 at one minute. All these six babies subsequently developed HIE gr. III.

DISCUSSION

Meconium aspiration before or during birth may obstruct airway and cause asphyxia and respiratory distress (Gregory et al., 1974). Although a large majority of MAS are neonatal and largely preventable, others may occur in utero due to unpredictable intrauterine events. Our finding of MSAF not always associated with asphyxia is consistent with the reports of Gregory et al. (1974) and Narang et al. (1993).

The consistency of meconium has a direct correlation with the neonatal outcome. The increase in the morbidity and mortality in babies born through thick meconium has been observed also by Gregory et al. (1974) and Narang et al. (1993). The factors that apparently place meconium stained neonate

at a high risk for neonatal morbidity include thick or peasoup meconium, fetal heart rate abnormalities or post dated pregnancies. However, MAS can also occur with thin MSAF (Wiswell, 1990).

Our study observed an incidence of MAS to 22.9% of the total MSAF deliveries. MAS has been reported in 5 to 10.5% of the newborns born through MSAF (Gregory et al., 1974) and (Narang et al., 1993). The optimum management of meconium stained infants at birth remains controversial and the value of combined obstetric and pediatric approach has been questioned by a recent study (Falciglia, 1988).

Careful nasopharyngeal suction of all the MSAF newborns at the delivery of head followed by selective tracheal intubation and suction in the presence of (a) meconium in oropharynx or (b) asphyxia or (c) thick meconium is a practical and safe option to reduce MAS and its complications (wiswell, 1990 and Paul et al., 1989).

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