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Mature Babies Delivered with Ordure Amniocentesis Newborn Results

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Abstract

The performance of amniocentesis is considered an alarming sign of possible harm to the fetus, and it has recently been reported that neonatal results correlate with the degree of meconium thickness. We retrospectively studied 400 term infants classified into the clear amniotic fluid group and MSAF grades 1, 2 and 3 based on the color and severity of atrial fibrillation. A multivariate logistic regression analysis was performed to assess the potential independent impact of different MSAF grade births on the risk of combined adverse neonatal outcomes. In MSAF, delivery was Grade 2 (OR 16.82, 95% CI 2.12-33.52; p=0.008) and Grade 3 (OR 33.79, 95% CI 4.24-69.33; p<0.001) regardless of risk of adverse neonatal disease Met. The following events are known to correlate with results, such as occurring at least once: Need for delivery room resuscitation, blood cord pH < 7.100, meconium aspiration syndrome (MAS), persistent pulmonary hypertension (PPH), transient neonatal tachypnea (TTN), acute respiratory distress syndrome (ARDS), hypoxia, development of ischemic encephalopathy (HIE), sepsis. There is a positive association between severity of meconium staining and amniotic fluid thickness and outcome in term infants. Therefore, evaluation and grading of her MSAF during labor will help the neonatologist plan obstetric care for prompt and appropriate neonatal care.

Keywords: Ordure amniocentesis; Staging; Outcome; Infant

Introduction

Forced amniocentesis Forced amniocentesis is considered a worrying sign of potential fetal harm associated with poor perinatal outcomes. The condition usually occurs in 7–20% of full-term women at risk and is associated with the development of meconium aspiration syndrome (MAS) in these deliveries of these; more than 90% are associated with meconium aspiration syndrome (MAS) [1]. MAS is responsible for up to 0.05% of neonatal deaths (1 in 2000 all pregnancies), and MSAF is associated with acute respiratory distress syndrome (ARDS) and hypoxic-ischemic encephalopathy (HIE).) is relevant. It is also associated with other neonatal diseases [2].

Although the amount of meconium in the fetal intestine increases in late pregnancy, the amniotic fluid remains clear throughout fetal life due to the closure of the internal and external anal sphincter muscles. MSAF is rare before 38 weeks' gestation, but the incidence increases gradually during pregnancy, being six times higher in women after 42 weeks' gestation than in women at 37 weeks' gestation. The development of MSAF may be a result of physiological maturation and motility of the fetal gastrointestinal tract, but it may also represent the fetal response to hypoxic stress [3]. Indeed, fetal hypoxia increases the release of arginine vasopressin from the fetal pituitary gland and stimulates colonic smooth muscle to facilitate the initiation of hyperperistalsis and relaxation of the anal sphincter muscle. However, stimulation of the vagus nerve (parasympathetic nerve) by umbilical cord compression can result in increased peristalsis and relaxation of the anal sphincter muscle, leading to intrauterine meconium transport due to fetal hypoxic stress. Finally, in rare cases, MSAF may be due to intrauterine infection or uterine bile vomiting secondary to fetal bowel obstruction. On the other hand, MSAF is associated with several maternal diseases that promote fetal hypoxia, including placental insufficiency, gestational diabetes, hypertensive pregnancy disorders, oligohydramnios, and substance abuse (tobacco, cocaine, etc.) [4]. Therefore, to predict and identify which infants are likely to develop her MSAF-related disorders, and to allow appropriate resuscitation and follow-up of the neonate if necessary, a history of these disorders is recorded. Recently, it was reported that outcomes in infants born with MSAF correlated regardless of the degree of meconium thickness. However, the literature on this topic is sparse and most studies are outdated, lack detailed information or have incomplete data analysis. In addition, MSAF-related neonatal morbidity may differ between delivery centers and neonatal intensive care units (NICUs) based on pregnancy, delivery, and neonatal care [5]. Therefore, based on previous considerations, we hypothesized that there is a positive correlation between different MSAF grades and the risk of developing mixed adverse outcomes in term infants. To test this hypothesis, we conducted this study with the aim of correlating the delivery of different thicknesses of MSAF with the risk of developing a composite negative neonatal outcome [6].

Materials and Methods

Study population

This single-center, retrospective study was conducted after approval by the Ethics Committee of the University Hospital of Florence (Italy). Infant's gestational age of 37 weeks or more were examined to determine if they delivered after attempted delivery. Exclusion criteria were severe fetal malformations, amniotic fluid containing blood, and delivery by elective caesarean section. About 3,000 newborns are born at our hospital every year, and the caesarean section rate in 2021 is 28% [7]. There are 24 dedicated neonatal beds (SP) and 10 neonatal intensive care beds. All MSAF births were attended by a neonatologist and provided immediate neonatal care as needed. Further treatment and possible admission to the neonatal ward were determined based on clinical evaluation [8].

Study design

The study cohort was divided into four groups according to

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meconium stain classification. Clear amniotic fluid (control group). Grade 1 or mild meconium group if the amniotic fluid is translucent and pale yellow-green. Grade 2 meconium or intermediate grade meconium if the amniotic fluid is milky and grade 1-3 in color. Grade 3 or severe meconium group. A thick, opaque, dark green MSAF is present, containing visually detectable particles ("pea soup" in the amniotic fluid). The MSAF and its classification have always been evaluated by midwives, who reported each case to obstetricians (including residents) [9].

Discussion

This study tested the hypothesis that there is an association between delivery in the presence of MSAF and the outcome of term infants after normal pregnancies, and that this association depends on the level of MSAF thickness. We found that births with MSAF grades 2 and 3, clinical chorioamnionitis, and oligohydramnios were associated with an increased risk of combined adverse neonatal outcomes, whereas induction of labor was associated with a higher risk of combined adverse neonatal outcomes [10].

Our results support those of Gluck et al., who recently documented an association between unfavorable neonatal outcomes and variations in MSAF thickness in a large retrospective study. In this study, the stages of MSAF (mild, moderate, and severe) were very similar to ours, but required transfusion requirements, phototherapy requirements, necrotizing enterocolitis, intraventricular hemorrhage, etc. There were some differences in the composite neonatal outcomes. Hypoxic-ischemic encephalopathy, periventricular leukomalacia, stroke, hypoglycemia, hypothermia, and death. Consistent with our study, Gluck et al. found that moderate (OR 1.51, 95% Cl 1.18-1.93; p=0.001) and severe (OR 2.42, 95% Cl 1.56-3.75; p<0.001) MSAF significantly predicted adverse outcomes. However, it has been established that mild meconium is not a predictor of adverse outcomes. In contrast to our study and previous studies, the study by Gluck et al., he developed HIE. He was higher in the moderate and severe MSAF groups than in the clear amniotic fluid group, but this probably depended on the size of the population, which was much larger. In contrast, our study and other previous studies found that the occurrence of MAS correlated with the thickness of his MSAF. The mechanism by which MSAF grades 2 and 3 increase the risk of adverse neonatal outcomes is that fetal hypoxia induces both increased intestinal peristalsis and relaxation of the anal sphincter, resulting in the passage of intrauterine meconium into the uterus. Explained by their common etiology. The uterus transports amniotic fluid and is associated with the development of neonatal complications such as MAS, PPH, TTN, and HIE, as well as the need for delivery room resuscitation and metabolic acidosis. It is therefore hypothesized that MSAF grade is a biomarker of fetal hypoxia and increases in proportion to the severity of hypoxia. This is suggested by the increased risk of poor neonatal outcome in infants with grade 3 MSAF compared to those with grade 2 MSAF. On the other hand, the absence of risk in the presence of grade 1 MSAF suggests that MSAF in these infants is at least often associated with physiological effects on fetal gastrointestinal maturation and motility, or fetal stress response to mild hypoxic stress. It seems to indicate that it may represent the reaction. Our study also found that clinical chorioamnionitis and oligohydramnios increased the risk of adverse neonatal outcomes, independent of MSAF. These results support previous studies reporting a role for chorioamnionitis in promoting fetal inflammatory responses and an increased risk of pneumonia, sepsis, cerebral palsy and perinatal mortality in term infants. Conversely, the role of oligohydramnios is uncertain, as some studies have shown no effect on perinatal outcomes, while others have shown effects such as: B. Increasing low birth rates. It's even more controversial.

Conclusions

We found a positive correlation between severity of meconium staining, meconium thickness, and outcome in term infants born in unproblematic pregnancies. Indeed, our results indicate that MSAF grade 2 and 3 births are independently correlated with increased risk of adverse neonatal outcomes. These results support the utility of assessing and grading her MSAF during delivery to plan a neonatal clinic visit for prompt and appropriate neonatal care.

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