Newborn Critical Care Center (NCCC) Clinical Guidelines

Management of the Infant with Meconium Stained Amniotic Fluid

A rapid assessment is done following birth, asking the following three questions:

1. Is the baby term?
2. Does the baby have good tone?
3. Is the baby breathing or crying?

If you answer 'yes' to all three, then the infant does not need resuscitation and should not be separated from its mother. The baby should be dried, placed skin-to-skin with the mother and covered with dry linen to maintain temperature. Observation of breathing, color and activity should be ongoing.

With these guidelines in mind, we recommend the following when asked to attend the delivery of an infant with MSAF:

1. The obstetrical team will explain to parents, prior to pediatric team arrival, that meconium-stained amniotic fluid may indicate fetal distress and increases the risk that the infant will require resuscitation after birth. Therefore, a team that includes an individual skilled in tracheal intubation should be present at the time of birth.
2. At the time of delivery, the neonatal team leader will perform rapid assessment to determine if immediate intervention is needed.
3. **Meconium stained, non-vigorous infant:** Move the infant to a radiant warmer and perform initial steps of resuscitation. PPV should be initiated if the infant is not breathing or if the heart rate is less than 100 bpm after the initial steps are completed. **Routine intubation and tracheal suction in this setting is not suggested because there is insufficient evidence to support this practice.**
4. **Meconium stained, vigorous infant:** Verbalize to the obstetrician that the infant may be placed skin-to skin with mother. The labor and delivery RN assumes responsibility for the vigorous infant at birth. Neonatal team will document delivery room attendance, noting that the infant was term, without distress at birth. Plan includes routine delivery room care per NRP guidelines. It is not necessary to document a physical exam simply document physical exam deferred.
5. While elective intubation and tracheal suctioning of the non-vigorous infant born through MSAF has not been shown to confer any benefit, the meconium aspirator remains an important piece of equipment for newborn resuscitation. It can be used to clear items obstructing the airway including amniotic fluid, vernix, blood, and cellular debris. Therefore, it should be readily available during delivery room resuscitation.
6. At any time, the obstetric team or the labor and delivery room RN may request a neonatal team evaluation.

References:

1. Aziz K, Lee C, Henry C, Escobedo MB, Hoover AV, Kamath-Rayne, BD, Kapadia V, Magid DJ, Niermyer S, Szyld E, Weiner GM, Wykof MH, Yamada NK, Zaichkin JG. (2021). Part 5: Neonatal resuscitation 2020 American Heart Association (AHA) guidelines update for cardiopulmonary resuscitation and emergency cardiovascular care. *Pediatrics*. 147(supple 1): e2020038505E
2. Chabra S, Sawyer T, Strand M. The "Meconium Aspirator": Still a Useful Tool during Newborn Resuscitation. *Am J Perinatol*. 2019;36(13):1420-1422. doi:10.1055/s-0038-1677477

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