

## No Benefit Seen With Suctioning During Birth of Meconium-Stained Neonates

SAN FRANCISCO (Reuters Health) Feb 11, 2003 - Suctioning during delivery of infants who present with meconium staining apparently does not prevent meconium aspiration syndrome. These findings, presented at the meeting of the Society for Maternal-Fetal Medicine, contradict current practice guidelines.

Lead study author Dr. Edgardo Szyld, of the Hospital Diego Paroissien in Buenos Aires, Argentina, believes that "we should consider revising the current recommendations" of suctioning these infants during delivery.

A total of 2514 infants with meconium-stained amniotic fluid were randomized to **oro- and nasopharynx suctioning** or to **no suctioning just before delivery of the shoulders**. Of those infants suctioned, **3.5% developed meconium aspiration syndrome (MAS)**, as did **3.6% of those not suctioned**. **Five newborns died in the suctioned group, and three in the group not suctioned**.

No differences between the two groups were observed in the frequency of thick meconium, C-sections or need for resuscitation.

A single study back in the 1970s was the foundation for the recommendation of suctioning when meconium staining is evident, Dr. Szyld said. Recommendations to suction, set forth by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists (ACOG) makes the practice "widespread-and it's done around the world."

However, he said, the current study shows that suctioning before the shoulders are delivered does not prevent meconium aspiration or its complications.

"The data presented by Dr. Szyld's team provides convincing evidence that suctioning probably does not" alter outcomes, Dr. Laura E. Riley, chair of ACOG's Committee on Obstetric Practice, told Reuters Health.

"Because suctioning has been beaten into clinicians for so many years, I'm not sure the current findings are really going to change clinical practice," Dr. Riley said. "Still, I think the findings may provide some reassurance to clinicians that when meconium aspiration syndrome occurs it probably didn't have anything to do with how adequately the infant was suctioned."

While Dr. Riley believes that the researchers succeeded in showing that suctioning is probably unnecessary, she said they didn't address "whether suctioning may actually have harmful effects, such as causing facial trauma."

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Oropharyngeal and nasopharyngeal suctioning of meconium-stained neonates before delivery of their shoulders: multicentre, randomised controlled trial.

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**BACKGROUND:** Meconium aspiration syndrome (MAS) is a life-threatening respiratory disorder in infants born through meconium-stained amniotic fluid (MSAF). Although anecdotal data concerning the efficacy of intrapartum oropharyngeal and nasopharyngeal suctioning of MSAF are conflicting, the procedure is widely used. We aimed to assess the effectiveness of intrapartum suctioning for the prevention of MAS.

**METHODS:** We designed a randomised controlled trial in 11 hospitals in Argentina and one in the USA. 2514 patients with MSAF of any consistency, gestational age at least 37 weeks, and cephalic presentation were randomly assigned to suctioning of the oropharynx and nasopharynx (including the hypopharynx) before delivery of the shoulders (n=1263), or no suctioning before delivery (n=1251). Postnatal delivery-room management followed Neonatal Resuscitation Program guidelines. The primary outcome was incidence of MAS. Clinicians diagnosing the syndrome and designating other study outcomes were masked to group assignment. An informed consent waiver was used. Analysis was by intention to treat.

**FINDINGS:** 18 infants in the suction group and 15 in the no suction group did not meet entry criteria after random assignment. 87 in the suction group were not suctioned, and 26 in the no suction group were suctioned. No significant difference between treatment groups was seen in the incidence of MAS (52 [4%] suction vs 47 [4%] no suction; relative risk 0.9, 95% CI 0.6-1.3), need for mechanical ventilation for MAS (24 [2%] vs 18 [1%]; 0.8, 0.4-1.4), mortality (9 [1%] vs 4 [0.3%]; 0.4, 0.1-1.5), or in the duration of ventilation, oxygen treatment, and hospital care.

**INTERPRETATION:** Routine intrapartum oropharyngeal and nasopharyngeal suctioning of term-gestation infants born through MSAF does not prevent MAS. Consideration should be given to revision of present recommendations.

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Clinical Trial

Multicenter Study

Randomized Controlled Trial

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