CRDB Catheter Falls Short in Some Cases

BY PATRICE WENDLING

CHICAGO — The cervical-ripening double-balloon catheter has a more favorable effect on cervical ripening than a Foley catheter in nulliparous, but not multiparous, women, according to a prospective randomized trial in 200 women.

VITALS

Major Finding: The mean interval from catheter withdrawal to delivery time was 9 hours for the CRDB catheter vs. 14 hours for the Foley catheter in multiparous women in the first study, a nonsignificant difference. Time from insertion to delivery was significantly less at a mean of 19 hours with the Foley vs. a mean of 23 hours with the CRDB in the second study.

Data Source: Two prospective, randomized studies comparing the CRDB catheter with the Foley catheter, the first in 200 women and the second in 188 women.

Disclosures: None was reported.

Israeli investigators compared the two devices after noting that labor induction rates had risen to 27% of pregnancies in their hospital and that the cervical ripening double-balloon catheter (Cook Medical) costs about 10 times more than a Foley catheter. It has a uterine balloon located at the distal end of the device and a second cervicovaginal balloon located 1.5 cm proximal to the first one.

A total of 100 nulliparous and 100 multiparous women, aged 18-45 years, with singleton pregnancies at at least 37 weeks' gestation and intact membranes were randomized to labor induction by Foley catheter or the cervical ripening double-balloon (CRDB) catheter. Data were evaluable in 180 women.

In nulliparous women, the increment in the Bishop score from catheter insertion until withdrawal or expulsion was significantly higher at a mean of 4.4 in the CRDB group, compared with a mean of 3.4 in the Foley group, Dr. Ido Solt and associates reported in a poster at the annual meeting of the Society for Maternal-Fetal Medicine.

The mean interval from catheter withdrawal to delivery time was significantly shorter at 15 hours in the CRDB group vs. 23 hours in the Foley group.

Nine of 45 (20%) nulliparous women in the CRDB group had a cesarean section, compared with 20 of 50 (40%) nulliparous women in the Foley group, which was statistically significant.

No significant differences were observed in multiparous women between the two catheters, reported Dr. Solt of the department of obstetrics and gynecology at Western Galilee Hospital in Nahariya, Israel.

The mean interval from catheter withdrawal to delivery time was 9 hours for the CRDB catheter vs. 14 hours for the Foley catheter.

Cesarean sections occurred in 17% of the 41 multiparous women who received a CRDB, vs. 16% of 44 multiparous women receiving a Foley.

A second poster presented at the same meeting reported that the Foley catheter with extra-amniotic saline infusion was a faster cervical-ripening device than the CRDB in a randomized trial involving 93 nulliparous and 95 multiparous women.

The primary outcome of time from insertion to delivery was significantly less at a mean of 19 hours with the Foley catheter vs. a mean of 23 hours with the CRDB, reported Dr. Elad Mei-Dan of Hillel Yaffe Medical Center in Hadera, Israel, and associates. Mean insertion to expulsion time was also significantly shorter at 7 hours with the Foley vs. 10 hours with the CRDB.

Ripening success was similar at 97% with the Foley and 99% with the CRDB. Cesarean section rates were also similar at 21% and 20%.

Patient satisfaction on a 10-point scale was 7 with the Foley catheter and 6.6 with the CRDB catheter, which was not statistically different.

In light of the findings and the significant cost difference between the two devices, a Foley catheter should be preferred initially, Dr. Mei-Dan said in an interview. He put the price at $3.50 for a Foley set and at $41 for the CRDB.

He noted that he and his associates still use the CRDB when a Foley catheter fails to achieve cervical ripening or when the preinduction cervical dilation is too big to hold the Foley balloon, but can still hold the Cook balloons. ■

Neonatal MRSA Often Community Acquired

BY KATE JOHNSON

MONTREAL — Community-acquired strains are the most common source of methicillin-resistant *Staphylococcus aureus* colonization and infection in babies in the neonatal intensive care unit, even though they have never left the hospital, researchers have found.

Findings in a 5-year retrospective study of 50 MRSA-colonized neonates in the NICU were presented at the annual meeting of the Infectious Diseases Society for Obstetrics and Gynecology.

"There are higher rates of community-acquired MRSA infection in our neonates than in our general adult and pediatric patient population," lead investigator Dr. Gweneth Lazenby of the Medical University of South Carolina in Charleston said in an interview. "This is a call for people to help us really detail the sources of such early colonization, how we can prevent it, and how we can prevent subsequent infection."

Theories on how neonates are exposed to MRSA in the NICU include maternal transmission, transmission from other family members or hospital workers, contaminated equipment, and a recently reported possible transmission through breast milk, she said.

"We have some concern about family members and maternal transmission to neonates, and so we would like to consider interrupting transmission by possibly culturing the individuals the babies are exposed to—including health care workers."

In the current study, there was a mean of 21 days between birth and colonization of the 50 infants. However, 30% tested positive within 7 days of birth, she said.

"The 30% of infants who acquired early MRSA colonization, within the first week, were 2.5 times more likely to go on to develop infection," she explained. No other risk factors for infection—including ethnicity, sex, method of delivery, gestational age, or length of stay—could be identified, although there was a nonsignificant trend toward a higher risk with lower birth weight.

In total, 16 of the 50 colonized infants (32%) eventually developed MRSA infections, which included eight blood stream infections, six skin and soft tissue infections, and two ventilator-associated pneumonia cases.

One of the bloodstream infections was fatal and was identified as a community-acquired MRSA strain (USA 300).

Pulse field gel electrophoresis identified USA 300 in 36% of 14 colonizing strains and 56% of 9 infection strains, she said. "This is considerably higher than what is seen in the rest of our hospital's pediatric and adult patient population, where we see a 4%-6% colonization rate and a 19% infection rate, with one-quarter of those infections being community acquired."

Dr. Lazenby said decolonization is not currently attempted in neonates. "No one has looked at the effect of topical decolonization, and we do try to be as minimally invasive as possible with neonates in the NICU."

The current management of colonized infants is isolation and contact precautions to prevent spreading the infection to other babies, she said. ■

Disclosures: *None was reported.*

No Raised Risk With Multiple Steroid Courses

BY PATRICE WENDLING

CHICAGO — The risk of death or neurologic impairment was similar at 2 years after exposure to either single or multiple courses of antenatal corticosteroids, according to a follow-up analysis of data from the multicenter MACS trial.

"Continued follow-up of these children is important and necessary to determine if there are subtle effects of steroid exposure that only become evident in later years," Dr. Elizabeth Asztalos said at the annual meeting of the Society of Maternal-Fetal Medicine.

VITALS

Major Finding: Death or neurologic impairment at 18-24 months was just under 14% among the offspring of women at high risk for preterm birth, irrespective of whether they were given a single course or multiple courses of antenatal corticosteroids.

Data Source: The MACS trial of 1,858 women at high risk for preterm birth.

Disclosures: MACS was funded by the Canadian Institutes of Health Research. The authors disclosed no conflicts of interest.

The findings are encouraging as the same group previously reported that multiple courses of antenatal corticosteroids (ACS) given at 14-day intervals do not improve preterm birth outcomes and are associated with a significant decrease in weight, length, and head circumference at birth (Lancet 2008;372:2143-51). "Therefore, this treatment schedule is not recommended," the authors wrote.

MACS, the Multiple Courses of Antenatal Corticosteroids for Preterm Birth Study, included women who were at high risk of preterm birth at 25-32 weeks' gestation. All of the women received an initial course of ACS. There were 1,858 women who were undelivered and remained at high risk at 14-21 days after the initial course of ACS. These women were randomized to either ACS or placebo given every 14 days until week 33 or delivery, whichever came first.

The secondary composite outcome of death or neurologic impairment was evaluated at 18-24 months. Neurologic impairment was defined as cerebral palsy or abnormal cognitive development defined by a Mental Development Index (MDI) score of less than 70 on the Bayley Scales of Infant Development–Second Edition.

Evaluations were conducted in 1,069 infants exposed to multiple courses of ACS and 1,035 infants exposed to placebo at a median of 22 months old.

The occurrence rate of the composite outcome was nearly identical—13.8% (148) of the ACS group and in 13.7% (142) of the placebo group, said Dr. Asztalos of the department of Newborn & Developmental Paediatrics, Sunnybrook Health Sciences Centre in Toronto. Also, the components of the composite outcome were nearly identical—mortality (49 vs. 47), cerebral palsy (24 vs. 25), and cognitive impairment (86 vs. 84). ■