Induction at 41 Weeks May Avert Complications

BY MICHELE G. SULLIVAN
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Riviera Maya, Mexico — Routine induction of labor at 41 weeks is safe for women with low-risk singleton pregnancies and may decrease the risk of postterm pregnancy complications for both mother and baby, Dr. Errol Norwitz said at a meeting on obstetrics, gynecology, perinatal medicine, neonatology, and the law.

"This would affect 30% of low-risk deliveries and 10%-15% of all deliveries, so this is a big management shift," said Dr. Norwitz, director of maternal-fetal medicine at Yale–New Haven Hospital, Conn. "It would definitely affect your practice."

But such a change would be both cost effective and safer for mother and baby, he asserted. Recent data suggest that routine induction of labor in these women is safer than previously thought, with little or no impact on cesarean delivery rates, and that the risks of postterm birth are greater than previously thought.

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Stillbirth is the greatest risk for the postterm fetus, with a fourfold increase at 43 weeks and a sevenfold increase by 44 weeks, compared with 40 weeks. Newer studies have identified other problems as well, including fetal macrosomia, meconium staining, "fetal distress," and uteroplacental insufficiency. Neonatal encephalopathy is also a risk, with a 13-fold increase at 42 weeks, compared with 38 weeks.

But the mother is also at risk, Dr. Norwitz said. "This is an underappreciated problem. Shoulder dystocia is much more common, as is severe perineal injury, with third- and fourth-degree tears. There is also an increased risk of postpartum hemorrhage."

In 1997, the American College of Obstetricians and Gynecologists recommended induction of labor after 43 weeks for low-risk pregnancies, but the current guidelines, issued in 2004, don't offer specific recommendations. This omission is possibly the result of concerns that labor induction is associated with an increase in the incidence of cesarean deliveries—an association that may never be conclusively proved or disproved, Dr. Norwitz said. "It would take a randomized controlled trial of 150,000 post-term pregnancies to really answer this question, and I don't think we're going to get that. We have to appreciate that the literature in this area is limited."

The best source of data is a 2000 Cochrane Database review, which included 26 trials of various size and quality (Cochrane Database Syst. Rev. 2000;2:CD000170). Those of highest quality, Dr. Norwitz said, were two randomized controlled trials of 108 (1992) and 440 (1994) pregnancies, and a Canadian trial of almost 3,500 conducted in 1992. Both 1992 trials showed a significant decrease in cesarean rates among pregnancies induced at 41 weeks, while the 1984 study showed no significant difference in cesarean rates between the two groups. The review also concluded that routine induction of labor after 41 weeks appeared to reduce perinatal mortality.

"It appears that in multiparous women and nulliparas with a favorable cervical exam, routine induction at 41 weeks doesn't carry an increased risk of a C-section," Dr. Norwitz said. "But in nullips with an unfavorable cervical exam, we might see the rate increase slightly. For these women, we must weigh the risk of preventing postterm complications to mom and baby with the risks of a cesarean delivery."

Dr. Norwitz offered an algorithm for managing postterm, low-risk, singleton pregnancies:

About 50% of all pregnancies reach the 40th week. At this time, discuss the option of induction and check the cervix, but do not institute fetal surveillance. About half of the group will deliver spontaneously within the next week. For the remaining patients, offer either induction of labor or expectant management at 41 weeks.

For the women who elect continued expectant management, discuss the risks of continuing the pregnancy beyond 41 weeks and document the discussion. Institute some method of fetal surveillance to assess the baby's condition. "No single test has ever been shown to be better than another, with the exception of Doppler velocimetry alone—that has not been shown to be adequately sensitive" Dr. Norwitz said. "Most of us do twice weekly fetal testing, and one of those assessments should include an estimation of amniotic fluid volume."

Most of these women will give birth by 42 weeks, leaving only 3%-4% of pregnancies to continue into the 43rd week. At this time, induction of labor should routinely be recommended because the increased risk of stillbirth is significant, he said.

Most women who choose induction at 41 weeks will deliver successfully, but some inductions will fail. Those women can be admitted for rupture of membranes and oxytocin, or sent home and brought back for a repeat induction in 2-3 days if the fetal testing is reassuring, Dr. Norwitz said. ■

Fish Oil Supplements May Benefit Infants' Eye-Hand Coordination

BY JONATHAN GARDNER
London Bureau

High doses of fish oil supplements in pregnant women improved eye and hand coordination in their babies at age 2½ years, according to a randomized controlled trial published Dec. 21.

Researchers said their trial (Arch. Dis. Child. Fetal Neonatal Ed. 2006 Dec. 21 [Epub doi 10.1136/adc.2006.099085)] is the first to show improvements in eye-hand coordination with fish oil supplements, and said the results suggest that research into the beneficial effects of fish oil supplementation during pregnancy may require higher dosages.

"These preliminary data indicate that supplementation with a relatively high-dose fish oil during the last 20 weeks of pregnancy is not only safe but also seems to have potential beneficial effects that need to be explored further," wrote the researchers, led by Jan Dunstan, research fellow with the University of Western Australia's school of pediatrics and child health. "Given the scarcity of data to support the efficacy of fish oil supplementation during pregnancy, our data have a potentially important role in informing on the effects of fish oil supplementation on early postnatal infant development."

The researchers randomized 52 pregnant women into a group supplementing their diets with 2.2 g of docosahexaenoic acid (DHA) and 1.1 g eicosapentaenoic acid (EPA) per day. A control group of 46 received olive oil supplements. Women were excluded from the study if their normal diet exceeded two meals of fish per week.

The researchers measured phospholipids in the red blood cells of the cord blood of the babies, and conducted tests measuring the babies' development at 2½ years.

Of the 72 babies that made it to the follow-up at 2½ years, all of the babies in the intervention group had significantly elevated DHA and EPA levels and significantly lower levels of arachidonic acid in their cord blood, compared with the control babies.

At 2½ years (mean age of 34.7 months), researchers could not identify significantly higher scores for the 33 babies in the fish oil group in growth, development, receptive language, and behavior, except for the eye and hand subscale of the Griffiths Mental Development Scales. On the eye and hand subscale, the intervention group's mean score was 114, compared with 108 for the control group.

"Although the underlying mechanism is not understood, DHA is known to facilitate rapid phototransduction in the retinal membrane, and deficiencies are associated with reduced retinal function in infant primates," the researchers write. "Furthermore, effects on visual evoked potential could indicate that DHA may also have an effect on the development of the visual cortex."

The researchers said the small size of their sample is a weakness of the study. Although theirs could be a chance finding, they said they found no adverse effects of fish oil supplementation in any of the measures of development. ■

Uterine Myomas in Pregnancy Increase Risk of Complications

Las Vegas — Uterine myomas that are present during pregnancy are significantly associated with pregnancy complications, including first- and second-trimester miscarriage, malpresentation of the baby at delivery, and preterm labor, Dr. Radwan Assad reported at the annual meeting of the American Association of Gynecologic Laparoscopists.

In addition, "a cesarean delivery in the presence of a low anterior myoma is associated with a high incidence of postpartum hemorrhage," said Dr. Assad of Wayne State University, Detroit.

Findings from previous studies have linked uterine myomas to pregnancy complications including preterm labor, placental abruption, and postpartum hemorrhage.

To further study the effect of uterine myomas on pregnancy complications, Dr. Assad and colleagues reviewed data from 155 women who were diagnosed with myomas during pregnancy. Overall, 45% of the women had vaginal deliveries and 55% cesarean deliveries.

Malpresentation at delivery (the most common complication) occurred in 22% of the patients. Of these cases, 16.8% were breech, 3.9% were transverse, and 1.3% were oblique. Other complications included growth restriction (17.4%), preterm labor (17.4%), and premature rupture of membranes (16.1%). In addition, 7.7% of the women had first-trimester miscarriages and 5.8% had second-trimester miscarriages.

Overall, the risk of postpartum hemorrhage was 27.3% among women who had cesarean deliveries, compared with only 2.6% among women who had vaginal deliveries. Notably, a low-lying anterior fibroid was associated with an eightfold risk of postpartum hemorrhage among women who had cesarean deliveries, Dr. Assad noted.

"But there was no correlation between the number of fibroids and the risk of postpartum hemorrhage," he said.

Early postpartum hemorrhage was defined as an estimated blood loss of more than 500 cc during a vaginal delivery and more than 1,000 cc during a cesarean delivery.

Myomectomies (which have been shown to reduce the risk of miscarriage in women with fibroids) were performed in 9% of the women who had cesarean deliveries, and the myomectomies were not associated with an increased risk of postpartum hemorrhage in these patients, Dr. Assad said.

—Heidi Splete

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