

# How do you feel about expectantly managing a well-dated pregnancy past 41 weeks' gestation?

Most women with a well-dated pregnancy should be offered the option of induction of labor before or at 41 weeks' gestation



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Most people know that preterm birth is a major contributor to perinatal morbidity and mortality. Consequently, strict guidelines have been enforced to prevent non-medically indicated scheduled deliveries before 39 weeks' gestation. Fewer people recognize that late-term birth is also an important and avoidable contributor to perinatal morbidity. To improve pregnancy outcomes, we may need enhanced guidelines about minimizing expectant management of pregnancy beyond 41 weeks' gestation.

## For the fetus, what is the optimal duration of a healthy pregnancy?

When pregnancy progresses past the date of the confinement, the risk of fetal or newborn injury or death increases, especially after 41 weeks' gestation. Analysis of this risk, day by day, suggests that after 40 weeks' and 3 days' gestation there is no medical benefit to the fetus to remain in utero because, compared with induced delivery, expectant management of the pregnancy is associated with

a greater rate of fetal and newborn morbidity and mortality.<sup>1</sup>

The fetal and newborn benefits of delivery, rather than expectant management, at term include: a decrease in stillbirth and perinatal death rates, a decrease in admissions to the neonatal intensive care unit (NICU), a decrease in meconium-stained amniotic fluid and meconium aspiration syndrome, a decrease in low Apgar scores, and a decrease in problems related to uteroplacental insufficiency, including oligohydramnios.<sup>2</sup> In a comprehensive meta-analysis, induction of labor at or beyond term reduced the risk of perinatal death or stillbirth by 67%, the risk of a 5-minute Apgar score below 7 by 30%, and the risk of NICU admission by 12%.<sup>2</sup> The number of women that would need to be induced to prevent 1 perinatal death was estimated to be 426.<sup>2</sup>

## Maternal benefits of avoiding late-term pregnancy

The maternal benefits of avoiding continuing a pregnancy past 41 weeks' gestation include a reduction in labor dystocia and the risk of cesarean delivery (CD).<sup>2,3</sup> In one clin-

ical trial, 3,407 women with low-risk pregnancy were randomly assigned to induction of labor at 41 weeks' gestation or expectant management, awaiting the onset of labor with serial antenatal monitoring (nonstress tests and assessment of amniotic fluid volume).<sup>4</sup> The CD rate was lower among the women randomized to induction of labor at 41 weeks' (21.2% vs 24.5% in the expectant management group,  $P = .03$ ). The rate of meconium-stained fluid was lower in the induction of labor group (25.0% vs 28.7%,  $P = .009$ ). The rate of CD due to fetal distress also was lower in the induction of labor group (5.7% vs 8.3%,  $P = .003$ ). The risks of maternal postpartum hemorrhage, sepsis, and endometritis did not differ between the groups. There were 2 stillbirths in the expectant management group (2/1,706) and none in the induction of labor group (0/1,701). There were no neonatal deaths in this study.<sup>4</sup>

Obstetric management, including accurate dating of pregnancy and membrane sweeping at term, can help to reduce the risk that a pregnancy will progress beyond 41 weeks' gestation.<sup>5</sup>

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### Routinely use ultrasound to accurately establish gestational age

First trimester ultrasound should be offered to all pregnant women because it is a more accurate assessment of gestational age and will result in fewer pregnancies that are thought to be at or beyond 41 weeks' gestation.<sup>5</sup> In a meta-analysis of 8 studies, including 25,516 women, early ultrasonography reduced the rate of intervention for postterm pregnancy by 42% (31/1,000 to 18/1,000 pregnant women).<sup>6</sup>

### Membrane sweeping (or stripping)

Membrane sweeping, which causes the release of prostaglandins, has been reported to reduce the risk of late-term and postterm induction of labor.<sup>7,8</sup> In the most recent Cochrane review on the topic, sweeping membranes reduced the rate of induction of labor at 41 weeks by 41% and at 42 weeks by 72%.<sup>7</sup> To avoid one induction of labor for late-term or postterm pregnancy, sweeping of membranes would need to be performed on 8 women. In a recent meta-analysis, membrane sweeping reduced the rate of induction of labor for postmaturity by 48%.<sup>9</sup>

Membrane sweeping is associated with pain and an increased rate of vaginal bleeding.<sup>10</sup> It does not increase the rate of maternal or neonatal infection, however. It also does not reduce the CD rate. In the United Kingdom, the National Institute for Health and Clinical Excellence recommends that all clinicians have a discussion of membrane sweeping with their patients at 38 weeks' gestation and offer membrane stripping at 40 weeks to increase the rate of timely spontaneous labor and to avoid the risks of prolonged pregnancy.<sup>11</sup> Of note, in one randomized



study of women planning a trial of labor after CD, membrane sweeping did not impact the duration of pregnancy, onset of spontaneous labor, or the CD rate.<sup>12</sup>

**Steps from an expert.** A skillful midwife practicing in the United Kingdom provides the following guidance on how to perform membrane sweeping.<sup>13</sup>

1. Prepare the patient. Explain the procedure, have the patient empty her bladder, and encourage relaxed breathing if the vaginal examination causes pain.
2. Abdominal exam. Assess uterine size, fetal lie and presentation, and fetal heart tones.
3. Vaginal exam. Ascertain cervical dilation, effacement, and position. If the cervix is closed a sweep may not be possible. In this case, massaging the vaginal fornices may help to release prostaglandins and stimulate uterine contractions. If the cervix is closed but soft, massage of the cervix may permit the insertion of a finger. If the cervix is favorable for sweeping, insert

one finger in the cervix and rotate the finger in a circle to separate the amnion from the cervix.

4. After the procedure. Provide the woman with a sanitary pad and recommend acetaminophen and a warm bath if she has discomfort or painful contractions. Advise her to come to the maternity unit in the following situations: severe pain, significant bleeding, or spontaneous rupture of the membranes.

Membrane sweeping can be performed as frequently as every 3 days. Formal cervical ripening and induction of labor may need to be planned if membrane sweeping does not result in the initiation of regular contractions.

### Collaborative decision making

All clinicians recognize the primacy of patient autonomy.<sup>14</sup> Competent patients have the right to select the course of care that they believe is optimal. When a patient decides to continue her pregnancy past 41 weeks, it is helpful to endorse respect for the decision and inquire

about the patient's reasons for continuing the pregnancy. Understanding the patient's concerns may begin a conversation that will result in the patient accepting a plan for induction near 41 weeks' gestation. If the patient insists on expectant management well beyond 41 weeks, the medical record should contain a summary of the clinician recommendation to induce labor at or before 41 weeks' gestation and the patient's preference for expectant management and her understanding of the decision's risks.

Obstetricians and midwives constantly face the challenge of balancing the desire to avoid meddle-

some interference in a pregnancy with the need to act to prevent adverse pregnancy outcomes. The challenge is daunting. A comprehensive meta-analysis of the benefit of induction of labor at or beyond term, estimated that 426 inductions would need to be initiated to prevent one perinatal death.<sup>2</sup> From one perspective it is meddlesome to intervene on more than 400 women to prevent one perinatal death. However, substantial data indicate that expectant management of a well-dated pregnancy at 41 weeks' gestation will result in adverse outcomes that likely could be prevented by induction of labor. If you ran an airline and could take an

action to prevent one airplane crash for every 400 flights, you would likely move heaven and earth to try to prevent that disaster. Unless the patient strongly prefers expectant management, well-managed induction of labor at or before 41 weeks' gestation is likely to reduce the rate of adverse pregnancy events and, hence, is warranted. ●



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