Post-Dates Pregnancy

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1. Term pregnancy is defined as 37 to 42 weeks gestation.
2. Accurate pregnancy dating is critical to assessment and management of post-dates pregnancy.
3. Timing of delivery should be prior to 42 weeks gestation; earlier if antenatal testing is nonreassuring.

BACKGROUND

When a firm estimated date of delivery (EDD) is established early in pregnancy, providers can anticipate that most pregnancies will result in spontaneous delivery at term. Term in this setting is defined as 37 to 42 weeks gestation. Under some circumstances, however, pregnancy may continue beyond 42 weeks, requiring assessment and management as a post-dates pregnancy. Although the exact number of pregnancies that continue beyond term is not well established (3–12%), approximately 10% of all pregnancies will result in induction of labor (although not all for post-dates pregnancy).

A significant first step in identifying post-dates pregnancies is confirmation of gestational dating. As noted in Chapter 3, a variety of measurements may be used to establish the EDD, including last menstrual period (LMP) and obstetrical ultrasound (US). Confirmation of the EDD is critical to appropriate management of post-dates pregnancy. For this reason, all such data should be reviewed carefully and confirmed.

Although pregnancy is not considered post-dates until 42 weeks of gestation, planning for management should begin at or near the EDD. Careful fetal

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monitoring and management for delivery is critical as post-dates pregnancy is associated with an increased risk for operative delivery, macrosomia, shoulder dystocia, meconium aspiration, and fetal mortality (twice baseline at 42 weeks, six times baseline by 44 weeks).

**DIAGNOSIS**

Approximately one-half of all post-dates pregnancies are caused by inaccurate gestational dating. For this reason, confirmation of the appropriate gestational age is critical.

**History**

The patient’s menstrual history should be reviewed, including the timing and normality of the LMP. Under a variety of conditions, the episode of bleeding considered to be the LMP may be inaccurate. Oligomenorrhea, prior use of contraception such as oral contraception or medroxyprogesterone, and pregnancy-related first-trimester bleeding may all alter the accuracy of menstrual history. First-trimester bleeding per vagina is very common and such bleeding may be interpreted as menstrual bleeding when, in fact, it was not. Early pregnancy bleeding is reviewed in Chapter 9.

The date of the first positive pregnancy test may be helpful in narrowing the possible dates of pregnancy. A review of the prenatal record should include obstetrical US results, if available, fundal height measurements, fetal quickening, and first noted fetal heart tones by US (4–6 weeks), handheld Doppler (10–12 weeks), or fetoscope (18–20 weeks). A pelvic examination with bimanual assessment of uterine size early in pregnancy may also provide confirmatory support for EDD.

Prior obstetrical history should be reviewed as a past history of post-dates delivery is associated with an increased risk of subsequent post-dates delivery.

**Physical Examination**

Primary confirmation of post-dates pregnancy is generally provided by a careful history. Physical examination is generally supplementary at term and should not alter an otherwise well-established EDD.

**Diagnostic Studies**

In the absence of adequate prenatal data to establish EDD, late pregnancy US may provide a broad estimate of gestational age. US accuracy diminishes with increasing gestational age, however, and late pregnancy results should be interpreted with caution. Although the exact accuracy of dating by US cannot be established, the “1 week per trimester” rule of thumb is a reasonable estimate of accuracy. US studies performed in the first trimester are accurate to within 1
week; those performed in the second trimester are accurate to within 2 weeks; those performed in the third trimester are accurate to within 3 weeks.

**MANAGEMENT**

Post-dates pregnancy presents two related challenges to providers: (a) assessment of continued fetal well-being and (b) assessment of need for induction.

Induction of labor is discussed in Chapter 20. As a general rule, the risk associated with post-dates pregnancy after 42 weeks gestation provides support for a policy of induction at or before that time. An overview of management is provided in Fig. 1.

**Assessment of Fetal Well-Being**

A variety of tests to assess fetal well-being are available. These tests range from patient-performed outpatient monitoring to formal monitoring with US examination. Prenatal care providers should be familiar with each of these options, their role in the management of post-dates pregnancy, and the strengths and limitations of each study. Assessment of fetal well-being should begin between 40 and 41 weeks of gestation and should continue until delivery.

**FETAL KICK COUNT**

Thirty to 60 minutes postprandial, lying on her left side, the patient monitors and counts fetal movements ("kicks"). Normal frequency is approximately five kicks per hour. Fewer than 10 kicks in 2 hours is considered abnormal. Although a reasonable adjunct to other methods of monitoring, fetal kick counts alone are probably insufficient to ensure fetal well-being. All reports of decreased fetal movement should be followed up by a non-stress test (NST) or a biophysical profile.

**NON-STRESS TEST**

During the NST, patients are monitored with external tocodynamometer and a Doppler fetal heart rate monitor. A reassuring NST consists of at least two accelerations in fetal heart rate in 15–20 minutes. Each acceleration should last at least 15 seconds and increase at least 15 beats per minute from baseline. (Fetal heart rate monitoring is reviewed in Chapter 26.). Non-stress testing should be repeated twice weekly beginning at 40–41 weeks gestation.

Non-reassuring NSTs may be associated with threats to fetal well-being, may represent a period of fetal sleep, or may be related to external factors such as medication. Non-reassuring NSTs should prompt additional follow-up.

**CONTRACTION STRESS TEST**

Fetal stimulation associated with uterine contraction has been observed to induce decelerations of fetal heart rate in circumstances where fetal well-being is threatened. This observation led to the development of the contraction stress
Oxytocin is used to induce uterine contractions. The fetal heart rate is monitored, in turn, for decelerations indicative of fetal stress. Contraindications to contraction stress test include preterm labor risk, classical cesarean section scar, and placenta previa.

Oxytocin is started at 0.5–1.0 mU per minute and increased every 15 minutes until a pattern of three contractions every 10 minutes is established. Late decelerations with 50% or more of contractions is considered a positive test and requires further evaluation. Infrequent late decelerations should prompt close monitoring and possible further evaluation. Variable decelerations should be followed by US evaluation to assess amniotic fluid status. A normal or negative test (no late or variable decelerations) is reassuring and should prompt routine fetal monitoring.

**BIOPHYSICAL PROFILE**

A biophysical profile is a multicomponent assessment of fetal well-being. Each of the five components is given a score of 0–2 with a maximum possible
score of 10. A score of 8 is reassuring; 6 is suspicious; 4 indicates a need for acute intervention.

The scoring matrix is summarized in Table 1. Components of the biophysical profile include the following:

1. An NST is performed. A reassuring NST is scored 2. A non-reassuring NST is scored 0.
2. Amniotic fluid index (AFI) score is obtained. An AFI score of 5 or higher with at least one 2-cm × 2-cm pocket of amniotic fluid present is scored 2 points. AFI less than 5 or no pocket of fluid is scored 0.
3. Sustained fetal breathing is monitored. Sustained fetal breathing of at least 30 seconds is scored 2. Absence of fetal breathing activity or duration less than 30 seconds is scored 0.
4. Fetal movement is monitored. At least three limb or trunk movements is scored 2. Less than three movements is scored 0.
5. Fetal tone is measured. Fetus flexion at rest with at least one movement of extension followed by return to flexion is scored 2. Extension at rest or lack of at least one extension/flexion movement is scored 0.

**SOURCES**