Bratzler DW, Houck PM, Richards C, et al. Use of antimicrobial prophylaxis for major surgery. Baseline results from the National Surgical Infection Prevention Project. Arch Surg. 2005;140:174–182.

FAST TRACK

Timing is important. I give 1 g IV cefoxitin in the OR and discontinue the drug 24 hours postoperatively to avert resistance

Q Are surgeons using the right prophylactic antibiotics?

A Right drugs, but the wrong timing in many cases. This national cohort study found that, while 92.6% of patients were given the recommended agents, the timing was often wrong. For example, the initial dose was given within 1 hour before incision in only 55.7% of patients, and the drugs were discontinued within 24 hours after surgery in only 40.7% of cases.

EXPERT COMMENTARY

A substantial volume of literature points to reduced infectious morbidity when prophylactic antimicrobials are administered prior to hysterectomy. Although this study explored the type of drug administered and the time it was given—issues of concern to ObGyns as well as other surgeons—it may not accurately reflect gynecologic experience, since the mean age of 73.3 years is significantly older than the usual hysterectomy patient. Moreover, hysterectomy cases constituted only 8% of the study population; the other 92% consisted of cardiac, vascular, orthopedic, and colorectal cases, which are less likely to be elective.

Antibiotics were given in 99% of cases

According to the "results" of this retrospective study, less than 1% of cases failed to receive prophylactic antibiotics. This is better compliance than other published reports have demonstrated. However, only slightly more than half received the antibiotic within the specified time frame, and administration continued beyond 24 hours in roughly 60% of cases.

Other compelling evidence

This study addressed issues of great importance to gynecologic surgeons, since infection is a serious source of postoperative morbidity and mortality among hysterectomy patients, but other studies have greater application to our patient population.

In a metaanalysis[1] involving 2,752 women who underwent abdominal hysterectomy, those who received preoperative cephalosporin had significantly less febrile morbidity and fewer postoperative infections than the controls who received no antibiotic. Patients who have vaginosis and are not treated immediately prior to hysterectomy have a 27% deep cuff infection rate, compared with 0% in the treated group.[1]

Recommendations

I prefer to administer 1 g intravenous cefoxitin after the patient arrives in the operating room and discontinue the drug 24 hours postoperatively.[2]

Keep in mind the risk of inducing antibiotic resistance—particularly methicillin-resistant staphylococcal infections—if the recommended prophylactic regimen, including its proper timing, is abandoned.

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CONTINUED

Simon CE, Grobman WA. When has an induction failed? Obstet Gynecol. 2005;105:705–709.

Q In labor induction, when do you call it quits?

A When the latent phase reaches 18 hours in nulliparous women, the likelihood of successful vaginal delivery decreases markedly.

FAST TRACK

64% of women deliver vaginally when the latent phase is less than 18 hours

EXPERT COMMENTARY

This paper explores 2 sides of the same question:

- When has an induction failed?
- Is there an optimal length of the latent phase where the vaginal delivery rate is high enough without placing the mother or baby in significant jeopardy?

This question is important because induction of nulliparous patients at or near term is a common obstetrical intervention, and because nulliparous women with an unfavorable cervix have a more protracted latent phase. The labor curve also differs between spontaneous and induced labors.

What constitutes a "failed" induction?

As the authors point out, we lack an exact definition. One group of researchers developed a definition based on outcomes.[1] "In their framework," Simon and Grobman note, "a failed induction of labor may be diagnosed in women whose continued lack of progression into the active phase makes it unlikely that they would safely proceed to a vaginal delivery." The investigators[1] opined that, in nulliparous gravidas, a latent phase of up to 12 hours was safe, while longer periods carried a low chance (13%) of vaginal delivery.

Simon and Grobman performed their study to "further determine the most clinically relevant definition of a failed induction of labor."

Details of the study

This was a relatively small retrospective chart review of 397 nulliparous women who were induced for medical or elective reasons. Of these, 32% underwent prior cervical ripening with the use of an extraamniotic saline-infusion catheter for 6 hours. The latent phase began with the initiation of oxytocin and amniotomy and ended when either 4 cm cervical dilation and 80% effacement were achieved, or the cervix dilated to 5 cm regardless of effacement.

Only 2% of women never achieved active labor prior to cesarean section, but the rate of cesarean delivery increased in near linear fashion with the lengthening of the latent phase. Nevertheless, 64% of women who had a latent phase up to 18 hours delivered vaginally. After 18 hours in the latent phase, the rate of vaginal delivery dropped such that the women who had a latent phase of 18.1 to 21 hours had a cesarean rate of 69%.

Other risks of a prolonged latent phase

Maternal hazards were an increased risk of chorioamnionitis and postpartum hemorrhage, though this did not translate into a lengthened hospital stay or increased transfusion rate. There was no appreciable neonatal consequence of a prolonged latent phase as measured by meconium, special care nursery admission, or umbilical cord pH.

Bottom line

This study provides some reassurance that, when the latent phase is 18 hours or less, patience may pay off with a vaginal delivery and acceptable maternal and neonatal risk. Keep in mind, however, that this study did not address the role of misoprostol for cervical ripening. Nor was it powered to assess the risk for relatively rare outcomes such as hysterectomy. ■

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