Neonatal and Maternal Outcomes With Prolonged Second Stage of Labor

S. Katherine Laughon, MD, MS, Vincenzo Berghella, MD, Uma M. Reddy, MD, MPH, Rajeshwari Sundaram, PhD, Zhaohui Lu, MS, and Matthew K. Hoffman, MD, MPH

(Obstet Gynecol 2014;124:57–67)

1. What is the goal of this study? Briefly describe the current standard of care regarding duration of the second stage at your institution and your cesarean delivery rate. Discuss how the study findings may be useful in your institution.

2. Identify the primary exposure groups examined in this study. Do you agree with the stratification by a) epidural status, b) parity? Why or why not?

3. Discuss whether the chosen study design and exposure groups were appropriate to accomplish the goals of the study.

4. Describe the key findings from this study. State which findings apply a) regardless of parity and epidural status, b) regardless of parity alone, and c) regardless of epidural status alone.

5. The authors report lower rates of vaginal delivery (79.9% vs 97.9%) and higher rates of composite neonatal morbidity (11% vs 8%) among nulliparous women with epidural analgesia who delivered after prolonged second stage than those who delivered within guidelines. Assuming the intent of the study was to allow half of the women in the population to have a second stage that exceeded guidelines but only 10% actually exceeded the recommended guidelines:

   a) Estimate the expected rates of vaginal delivery and composite neonatal morbidity for nulliparous women with epidural in the two groups.
   
   b) Discuss the potential effect of a policy to allow prolonged second stage on the cesarean delivery rate among nulliparous women with epidural.

6. Review the American College of Obstetricians and Gynecologists Consensus Care Series document on “Safe Prevention of the Primary Cesarean Delivery.” What does ACOG recommend regarding management of a prolonged second stage of labor? Discuss whether or not you agree with these recommendations.

7. ACOG Consensus Care Series recommendations regarding prolonged second stage are based on “low to moderate” quality evidence. Describe how you would design a study to obtain “high” quality evidence to support or refute these recommendations.