

As a childbirth educator, lactation consultant (IBCLC), instructor of nursing students in pediatric nursing and a pediatric nurse practitioner providing primary care in an office setting, I have the unique opportunity to interact with parents from the prenatal to well beyond the postpartum period. In my experience, I find most prospective parents do all they can to educate themselves regarding the childbirth experience and strive to make informed choices in pain management during labor and feeding choices for their newborn. When mothers who want to breast-feed their newborns are considering an epidural for pain management they may be unaware of the potential impact this choice may have on their ability to successfully breast-feed in the early newborn period. If parents, and more importantly nurses, aren't aware of the possible impact that epidurals may have on breast-feeding, is it possible for the laboring mother to make an informed decision regarding her choice of pain management? I offer the following as commentary and hope it will provide the opportunity for discussion and serve as a potential area of future nursing research for the promotion of successful breast-feeding.

The prospective parents in this scenario are well educated professionals who are in their late 20s. They are having their first child and have taken prenatal childbirth and breastfeeding classes. They have decided to breast-feed their newborn and hope to breast-feed for the first year of life. They have informed themselves regarding pain management during their planned vaginal delivery. They plan on using comfort techniques and are open to the possibility of an epidural. During their childbirth class they were informed that an epidural may require interventions such as an IV and additional IV fluids, the placement of a urinary catheter, connection to the bed, continual fetal monitoring and the possibility of ineffective pushing during second stage requiring an episiotomy and/or the use of a vacuum.

When the mother arrives at the hospital in early labor, she is assessed, admitted and told to call the nurse for any concerns and is monitored per the hospital protocol. When the laboring mother is at 4cm and uncomfortable the nurse asked her if she wants an epidural. Feeling inadequate to deal with the discomfort the mother agrees to the epidural. She signs an informed consent presented to her by the certified nurse anesthetist after being explained the risks of the epidural which include the possibility of bleeding, infection, headache, ineffective pain relief, hypotension, an increased risk of ineffective progression of labor and ineffective pushing. An IV is started and the mother receives the required bolus of fluids and the epidural procedure is completed. The nurse monitors the mother as required by protocol.

Soon after the epidural the mother is comfortable for the remainder of her labor and does not require any extra attention from the nurse who has two other laboring patients. When the mother is fully dilated and effaced and at station +2 she is assisted with pushing. After two hours of pushing and some variable decelerations on the monitor the OB provider suggests a vacuum to assist with delivery. With vacuum assist a male infant is delivered with apgars of 7 and 9. During the second stage of labor the mother had a temperature of 101.5°C. She had not received any antibiotics as she was GBS negative and her rupture of membranes of clear fluid was five hours.

After repair of the episiotomy the nurse brings the newborn to the mother to breast-feed. The nurse notices the mother has flat nipples and has a sense this probably won't go well since the infant is sleepy. The infant doesn't latch and the parents enjoy holding their newborn. Since the infant's weight and gestational age place him in the appropriate for gestational age (AGA) category, the newborn stays with the mother until her transfer to the postpartum unit.

Upon arrival to the unit the newborn nursery nurse assesses the infant and documents a rectal temperature of 100°C. The pediatric provider is notified and because of maternal fever during labor the infant has a complete blood count and blood cultures. The white count is slightly elevated and the newborn is transferred to the NICU and started on a course of antibiotics until the blood culture results are available. It is 6 hours after birth and the infant has not breast-fed. The mother has a 3<sup>rd</sup> degree laceration and is too uncomfortable to see the newborn in the NICU and the nurse offers to give the infant formula using a bottle. The mother was not offered the option of using a breast pump.

When it is time for the next feeding the mother wants to breast-feed and requests assistance from the lactation consultant. The lactation consultant reviews the history and notes several risk factors that may interfere with successful breast-feeding. It is a first time mother with no breast-feeding experience whose milk may not be in until day 2 or 3. The infant has not latched since birth as he was sleepy after delivery which may have been due to the epidural. It is reported that the mother has flat nipples, probably more pronounced due to excessive IV fluid administration and the use of oxytocin, which promotes fluid retention, and edema around the areola, the infant is separated from his mother and is in the NICU due to maternal fever, which may have been due to the epidural. The infant has been given a bottle of formula in NICU.

The delivery was vacuum assisted which often causes the infant to have an initial disorganized suck due to head discomfort from the vacuum device. Use of the vacuum is more common with the epidural analgesia due to the mother's inability to change positions during second stage and push effectively. The mother is O+ and the infant is A+ and Coombs is positive. The infant is at risk for jaundice due to ABO incompatibility which will be more likely if the infant is not breast-feeding frequently to promote stooling. He may have an order to be supplemented with formula depending on the severity of the jaundice.

Is the mother aware that some of these risk factors have been associated with the use of the epidural? Most likely she is unaware

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of the potential association. Should she have been informed of the potential risk factors prior to making her decision about an epidural? She signed an informed consent, but nothing was mentioned about the possible effects of the epidural on successful breast-feeding. Should the lactation consult inform her of the risk factors identified if the infant doesn't latch for the next feeding? Often mothers will blame themselves if successful breast-feeding is not achieved.

The American Academy of Breast-feeding Medicine (ABM) is a leading proponent of policies to enhance breast-feeding. In the Breast-feeding Medicine Clinical Protocol #15, the ABM states that maternity care providers should initiate an informed consent discussion for pain management in labor during the prenatal period before the onset of labor. Risk discussion should include what is known about the effects of various modalities on the progress of labor, risk of instrumentation and Cesarean delivery, effect on the newborn, and possible breast-feeding effects. Unmedicated, spontaneous vaginal birth with immediate, uninterrupted skin-to-skin contact leads to the highest likelihood of baby led breast-feeding initiation. Labor pain management strategies

may affect these labor outcomes and secondarily affect breast-feeding initiation. Continuous labor support reduces the need for pharmacologic pain management in labor and leads to improved breast-feeding outcomes both in the immediate postpartum period and several weeks after birth. Infants lose more weight in the first postpartum days when labor medications are used. Some of this weight loss may be a result of mothers receiving an intravenous fluid load for epidural analgesia. Babies may be slightly heavier on the average and lose more weight in the first days postpartum when epidural analgesia is used. In addition, IV fluids may increase breast engorgement and interfere with subsequent milk production and/or transfer of milk.

Carefully evaluating procedures that are considered routine and identifying their possible impact on successful breast-feeding in the early postpartum period may increase successful breast-feeding. For the lactation consultant in the hospital the only situation that requires more attention than the new mother attempting to breast-feed is the "experienced" mother who wasn't successful at breast-feeding her previous child and doesn't know why it didn't work the first time.