First Do No Harm: Interventions During Childbirth

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Abstract

Although medical and technological advances have drastically reduced maternal and infant mortality, these interventions have become commonplace if not routine. Used appropriately, they can be life-saving procedures. Used without valid indications, can transform childbirth from a normal physiologic process and family life event into a medical or surgical procedure. Every intervention presents the possibility of untoward effects and risks that engender the need for more interventions with their own inherent risks. Unintended consequences to intrapartum interventions make it imperative that childbirth educators work with other health professionals to promote natural childbirth processes and advocate for informed consent and alternative choices. Interdisciplinary collaboration can ensure that intrapartum caregivers "first do no harm".



Scenario

Cara is a G3 P2 in spontaneous labor at 38 weeks. On admission to L&D, she was put to bed and placed on electronic fetal monitoring. She was 3-4 cm. dilated, 50% effaced, and a -1 station. Her contractions were 3-5 minutes apart lasting 50-60 seconds. Fetal heart tones were 150's with average variability and accelerations. IV fluids were initiated, and she was told not to consume anything except ice chips or hard candy. When Cara was uncomfortable she was given an epidural, and thereafter was catheterized as needed. When contractions decreased, the physician ordered an amniotomy and Pitocin augmentation which caused contractions to increase in frequency, duration, and intensity.

When Cara was completely dilated with the fetal head at 0 station, the physician had Cara start pushing. She pushed for two hours but was only able to bring the head to a +2 station. The fetal heart tracing indicated prolonged variable decelerations and minimal variability. Faced with a Cesarean or instrumental delivery, the physician opted to use vacuum extraction with a midline episiotomy.

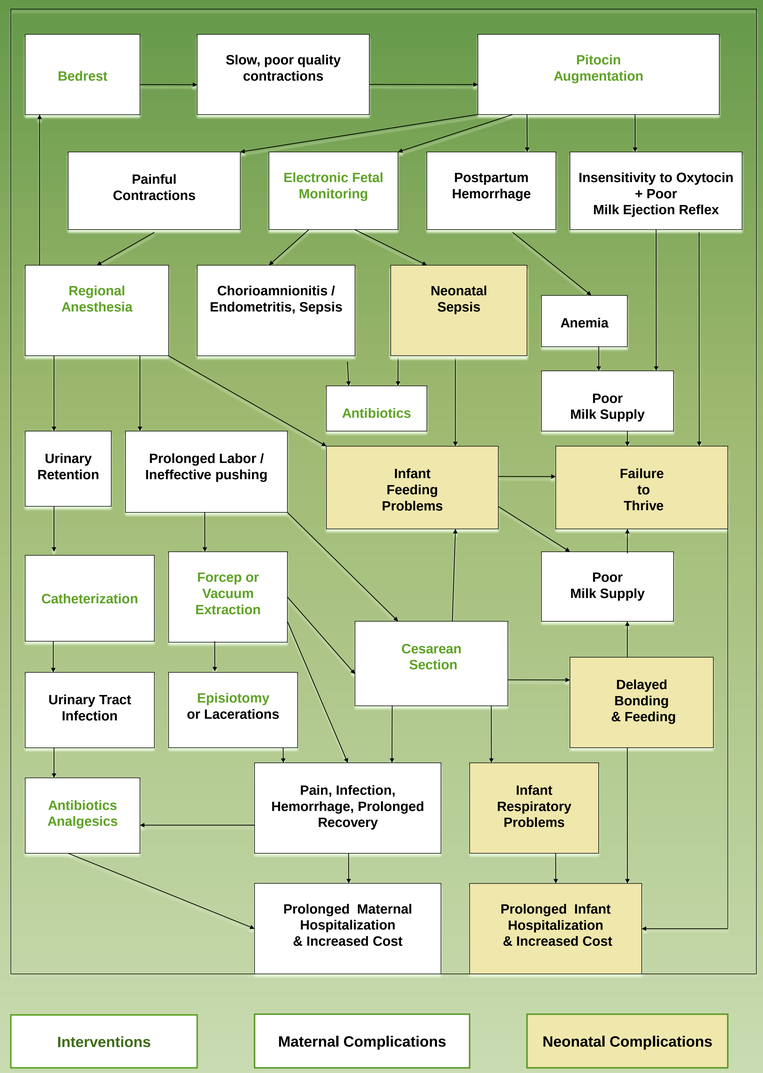
The infant began to cry with stimulation. Apgar scores were 8 - 9. The nurse completed the newborn assessment and procedures before briefly handing the baby to Cara then took it to the nursery because of a maternal temperature of 100.9º. Cara had planned to initiate breastfeeding in the delivery room as she had with her other babies.

Cara's story is typical of women in labor across the nation. Not only does each intervention interfere with normal birth processes but can lead to deleterious outcomes.

Common Interventions	Possible Complications
Bedrest or Recumbent Position	Dystocia; Poor quality contractions Slow dilatation & effacement; Prolonged labor; Failure to descend Increased pain; more analgesia / anesthesia Maternal hypotension; Vena cava syndrome Decreased uteroplacental blood flow Cesarean section for fetal distress or failure to progress Increased instrumental births & episiotomies.
Continuous Electronic Fetal Monitoring	Restricts maternal movements Higher rates of C-sections & vacuum extractions Internal monitoring increases risk of infection Prevents comfort measures; Focus on monitor instead of mother
Limited Oral Intake during Labor	Maternal dehydration / fever; Ketosis; Hyponatremia Maternal stress
Frequent vaginal exams	Risk of chorioamnionitis & puerperal infections; May impact future fertility Risk of neonatal Group B Streptococcal infection Increased antibiotic use in mother & infant; Increased allergies & asthma
Induction / Augmentation of Labor	Rapid onset of painful contractions; Increased use of regional anesthesia Uterine hyperstimulation; Cervical injury / uterine rupture Fetal distress; Requires continuous EFM
Amniotomy	Prolapsed cord or fetal injury Bleeding from undiagnosed vasa previa Maternal or fetal infection Commitment to an outcome; Increased risk of C-section
Regional Anesthesia	Poor quality contractions; Prolonged first & second stage of labor Increased use of Pitocin augmentation Increased instrument-assisted birth; Increased C-section rate Elevated maternal temperature; Increased low backache Interference with neonates breast-seeking & breastfeeding behaviors Negative impact on breastfeeding; More supplements & delayed lactogenesis Urinary retention / distended bladder
Catheterization	Risk of urinary tract infection Increased antibiotic use; Risk of allergy, asthma & yeast infections Delayed ambulation, first voiding, oral rehydration & intestinal movement Increased duration of hospital stay with increased cost Decreased satisfaction with birth experience
Closed-glottis Pushing	Fetal oxygen desaturation & acidosis Maternal fatigue Increased perineal trauma
Instrumental Delivery	Increased episiotomies, extensions, & perineal / anal sphincter lacerations Fecal or urinary incontinence; Pudendal nerve damage; Dyspareunia Increased pain, infection, hemorrhage & recovery time Increased incidence of emergency Cesarean Section Neonatal cephalohematoma; Retinal hemorrhage; Facial nerve damage Subgaleal hematomas; Shock & exsanguination Nerve damage causing poor suck & early cessation of breastfeeding Low Apgar Scores, more days in special care & increased hospital costs More neonatal deaths
Cesarean Section	Increased pain, headache, backache Hemorrhage; Infection Uterine rupture with subsequent pregnancy; Limited future birthing options Placental & uterine problems Bladder injury; Infection; Incontinence

> ***"It may seem a strange principle to enunciate as the very first requirement in a hospital that it should do the sick no harm".***
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> ***Florence Nightingale , 1857***

Cascade of Complications Potentially Initiated by Bedrest



References

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