Chorioamnionitis and Vaginal Examinations in Labor
Unja Kim, RN, Ashley Stowers, RN, Andrea Chaldek, RN, Molly Lockwood, RN, Nyree Van Maarseven, RN, Anna Woertler, RN, and Catherina Madani, PhD, RN

Background

Chorioamnionitis is an infection of the placental membranes and of the amniotic fluid. Chorioamnionitis usually occurs when membranes are ruptured, and results from the migration of cervicovaginal bacteria into the uterus.\(^1\)

Chorioamnionitis is one of the most frequent causes of infant illness and is associated with 20 to 40% of cases of early onset neonatal sepsis and pneumonia.\(^2\) Other complications include:
- Neonatal
- Maternal
- Cerebral white matter damage
- Postpartum hemorrhage
- Neurodevelopmental delay
- Endometritis
- Cerebral palsy
- Sepsis
- Pneumonia

The risk factors that contribute to the development of chorioamnionitis include:
- Maternal Group Beta Streptococcus infection
- Induction of labor
- Prolonged labor (>24 hours)
- Prolonged rupture of membranes (>18 hours)
- Use of invasive instruments (e.g., intrauterine pressure catheters)
- Vaginal exams

Vaginal exams (VEs) have become an established part of routine intrapartum care; however, the evidence to support the current frequency of this practice is limited. What is known, however, is that fewer VEs decrease the likelihood of infections, and that eight or more VEs during labor increase the risk for chorioamnionitis\(^3\). The World Health Organization recommends limiting vaginal exams to only those that are strictly necessary, or at most every four hours during the first stage of labor\(^4\).

A recent Kaiser study of all singleton births from 1995-2010 revealed that the incidence of chorioamnionitis has more than doubled, from 2.7% to 6.0%\(^5\). Therefore, while chorioamnionitis is a serious condition, rates are on the rise. VE frequency is one risk factor healthcare providers have control over. More information is needed to assess healthcare providers current chorioamnionitis knowledge, and VE practice.

Specific Aims

To explore current knowledge, attitudes, and practices of healthcare providers regarding vaginal exams and chorioamnionitis.

Methodology

Cross sectional descriptive study looking at 76 registered nurses working in labor and delivery units at 3 San Diego hospitals. Participants completed written surveys assessing demographics, personality type, and attitudes and practices when caring for laboring patients – including vaginal exam frequency.

Instrument & Data Analysis

Researchers developed a survey with:
- 8 Likert-type questions regarding # of VEs performed in a 2-3 hour period for various pregnancy conditions
- 2 case studies assessing: (1) ability to identify chorioamnionitis risk factors, & (2) VE practice

Analysis: descriptive, correlation and between group analysis was performed.

Findings

- Of nine risk factors for chorioamnionitis described in the case study, less than half of all nurses were able to correctly identify five or more risk factors.
- More than one third of nurses sampled reported being more aggressive with their VE frequency (i.e., they would perform 4 or more VEs in the case study presented).
- Nurses’ years of experience were found to be negatively correlated with the number of VEs performed, \(r_S(76) = -0.330, p = 0.004\). Nurses with more years of labor and delivery experience were less likely to perform VEs in the case study scenarios presented.

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References


Implications

Further education is needed among healthcare providers regarding:
- Identification of risk factors for chorioamnionitis
- Utilization of evidence-based chorioamnionitis prevention strategies such as:
  - Reducing vaginal examination frequency
  - Incorporating alternative non-VE, or alternate methods for assessing labor progress