Reducing Perineal Tears: The Effect of Pushing Methods and Length of 2nd Stage of Labor

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Reducing Perineal Tears: The Effect of Pushing Methods and Length of 2nd Stage of Labor
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Patient Care Issue
- Lacerations (tears) of the vagina and surrounding tissue commonly occur during delivery due to stretching forces from the baby passing through the birth canal.
- 18% of obstetrical procedures are laceration repairs, even higher than the C-section rate. (CDC.gov)
- Laceration effects: include pain, risk for infection, decreased mental/social well-being following delivery
- 2 types of pushing methods:
  - Instructed (immediate): patient is advised to begin pushing methodically upon complete cervical dilation (10cm)
  - Spontaneous (delayed): the patient is encouraged to postpone pushing until she feels the urge (Prins et al., 2011)
- This subject has not been adequately studied previously.

Evidence-Based Practice Question
In women in the 2nd stage of labor (pushing stage), how does spontaneous pushing compared to instructed pushing affect perineal lacerations and length of 2nd stage labor?

- Population: women in 2nd stage of labor
- Intervention: spontaneous pushing
- Comparison: instructed pushing
- Outcomes: perineal lacerations/length of 2nd stage labor

Registered Nurse Interview
The researchers interviewed an RN with about eight years of experience in a labor and delivery unit. The following questions were asked:
1. Is it better for mothers to push when they feel the urge?
   - When the woman feels the urge to push, she should be encouraged to suppress this urge.
2. Is it better for mothers to push only when directed in order to maintain steady pushing?
   - If the woman has an epidural and cannot sense the urge to push, maintaining slow, steady pushing is better because it more gradually stretches the birth canal.
3. Which type of pushing causes less severe perineal trauma?
   - There is no significant difference has been noticed.
4. Which method is typically practiced in this hospital?
   - Depends on the situation and preferences of medical personnel.

Search Methods
- Databases: PubMed, Cochrane Collection Plus, Cedarville University OneSearch, World Health Organization
- Key words: perineal laceration, spontaneous pushing, instructed pushing, second stage labor, valsalva, labor and pushing
- Inclusion criteria: childbearing age, scholarly articles, spontaneous vaginal delivery
- Exclusion criteria: articles in languages other than English, articles published before 2010

Search Results
The search yielded 29,893 articles, of which 10 were chosen:
- 4 systematic reviews (level of evidence 1)
- 2 randomized trials (level of evidence 2)
- 1 quasi-experimental trials (level of evidence 3)
- 3 cohort studies (level of evidence 4)

Findings from critique of articles
Does spontaneous pushing decrease lacerations?

Does spontaneous pushing increase the length of 2nd stage of labor?

Synthesis of Evidence
- Limited evidence was found concerning the direct influence of pushing methods on perineal lacerations.
  - Only one study found a direct statistical difference between type of pushing and laceration rate.
  - (Balogohc et al., 2012)
- However, there is a relationship between lacerations and length of 2nd stage of labor.
  - Risk of laceration increases when the duration of 2nd stage of labor increases.
  - (Aiken, 2015, Frey et al., 2012)
  - The duration of 2nd stage is significantly longer in women who push spontaneously.
  - (Furad, 2012)
- Therefore, spontaneous pushing possibly increases the rate of lacerations.

Conclusion
In women during the 2nd stage of labor, spontaneous pushing may decrease perineal lacerations, although it is unclear. However, spontaneous pushing does cause an increase in the length of the 2nd stage of labor, which increases laceration incidence. Therefore, spontaneous pushing may indirectly affect laceration rate.

Evidence-Based Practice Recommendations
Using the IOWA Model as theoretical framework, the researchers found that lacerations during 2nd stage labor are a significant clinical problem. Upon assembling research findings and synthesizing the evidence, they conclude that further research is needed to determine if utilizing spontaneous pushing could decrease lacerations during delivery. Because the evidence is inconclusive, pregnant women should be educated about the benefits and risks of both pushing methods and be encouraged to decide based on the information they are given.

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Limitations
- Some studies were conducted outside the US.
- Some factors were not controlled in all studies, such as maternal position during labor and caregiver differences in practice.
- Both nulliparous and multiparous mothers were included in many studies. These factors alone may affect on length of 2nd stage of labor.
- The majority of study participants were Caucasian.

References