



Water Birth vs. Traditional Birth Infection Rates

California State University, Chico

Sasha Sinkevich, Nicollette Singleton, Natalee Snyder, and Stephanie Palmer



PURPOSE

PURPOSE:

To compare the difference in the perineal infection rates following vaginal deliveries in women birthing in water and those delivering traditionally.

RESEARCH QUESTION

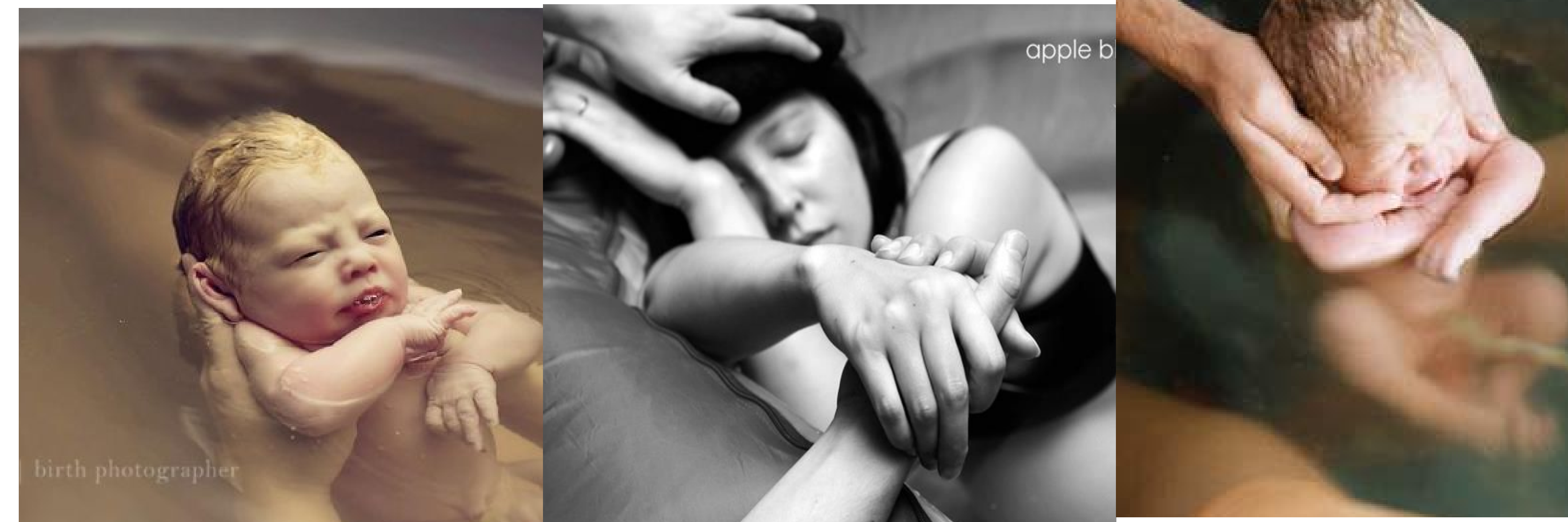
Is there a difference in the rates of infection following perineal tears between the water birthing method versus the traditional birthing method in California?

BACKGROUND

- Approximately 75% of all women who give birth vaginally will suffer from various levels of birth lacerations (Lundquist, Olsson, Nissen, & Norman, 2000)
- One in ten women who received a perineal laceration during a vaginal delivery later developed an infection (Johnson, Thakar, & Sultan, 2012)

METHODS

- **Approach:**
 - Physiologic quantification of infection rate
- **Procedure:**
 - Approval from IRB
 - Universal training for involved healthcare staff
 - Retrospective chart review
 - Maintenance of confidentiality
 - Anonymous identification
 - Paperwork locked in filing system
- **Measures:**
 - Measurement tool: oral electronic thermometer
 - $\geq 38^{\circ}\text{C}$ determines the presence of infection
 - Recalibration will occur on a regular basis according to birthing center protocol in order to prevent measurement error



SETTING AND SAMPLE

- **Setting:**
 - 25 birthing centers in California that provide postpartum checkups
- **Location Inclusion Criteria:**
 - Offer options of water and traditional birthing methods
 - ≥ 25 births occurring per month
 - protocol in place for first postpartum check-up within 4-6 weeks
- **Sample**
 - 100 women giving birth vaginally & 100 women giving birth using the water birth method
- **Inclusion criteria**
 - No predisposed complications
 - Full-term pregnancy
 - Age range of 20-34
- **Exclusion Criteria**
 - Presentation of high risk complications
 - Greater occurrence for infection unrelated to perineal tear (>4 vaginal examinations, PIH, multiple pregnancies, substance abuse during pregnancy, birth after 24 hours since the rupture of membranes, use of forceps, birth of preterm infant, maternal age >35, and underlying chronic health conditions)

DATA ANALYSIS

Test Used:

- Chi Square test of independence
- Is infection present or absent based on temperature?
- P value set at 0.05 (5%)

$$\chi^2 = \sum \frac{(\text{observed} - \text{expected})^2}{\text{expected}}$$

CONCLUSION

- This study has yet to be conducted but will determine if there is a difference in rates of perineal infection following perineal tears based on mode of delivery in California.

REFERENCES

- Johnson, A., Thakar, R., Sultan, A.H. (2012). Obstetric perineal wound infection: is there underreporting?. *British Journal Of Nursing*, S28-35. Retrieved from: eds.a.ebscohost.com.mantis.csuchico.edu/ehost/detail/detail?vid=3&sid=699e5785-425-95dc-f8a0148ef7e5%40sessionmgr400&hid=4103&bdata=JnNpdGU9ZW
- Lundquist, M., Olsson, A., Nissen, E., & Norman, M. (2000). Is it necessary to suture all lacerations after a vaginal delivery?. *Birth: Issues In Perinatal Care*, 27(2), 79-85. Retrieved from: eds.b.ebscohost.com.mantis.csuchico.edu/ehost/pdfviewer/pdfviewer?vid=14&sid=6f42e372-6a67-4a74-a072-9e07b34c169c%40sessionmgr114&hid=116
- Menakaya, U., Albayati, S., Vella, E., Fenwick, J., & Angstetra, D. (2013). A retrospective comparison of water birth and conventional vaginal birth among women deemed to be low risk in a secondary level hospital in Australia. *Women & Birth*, 26(2), 114-118. doi: 10.1016/j.wombi.2012.10.002
- Mollamahmutoğlu, L., Moraloğlu, A., Azyer, Ş., Su, F., Karayalşın, R., Hanşerlioğlu, N., & Dilmen, U. (2012). The effects of immersion in water on labor, birth and newborn and comparison with epidural analgesia and conventional vaginal delivery.

ACKNOWLEDGEMENTS

- We would like to acknowledge and thank the Kappa Omicron chapter of STTI for support in this endeavor.
- We would like to acknowledge and thank Dr. Gayle Kipnis for all of her hard work and support as our mentor and advisor throughout this experience.

CONTACT INFORMATION

- California State University, Chico
400 West First Street
Chico, CA 95929-0200
Phone: 530-898-5891
Email: ssinkevich@mail.csuchico.edu