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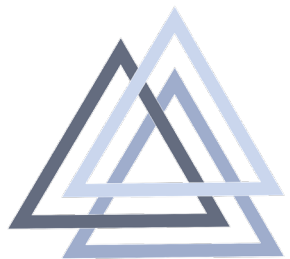
Annual Meeting • 2024

January 20-23 • The Cloister at Sea Island



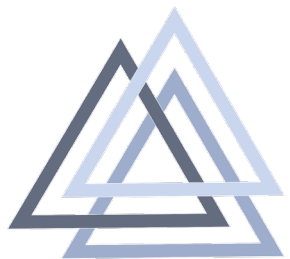
Examining a Concerning Rise: Uterine Ruptures at a Single Institution

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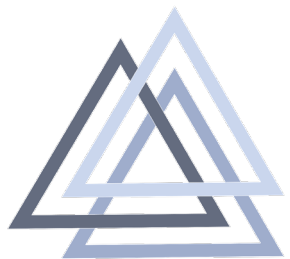
Disclosure

I have no financial relationships to disclose.



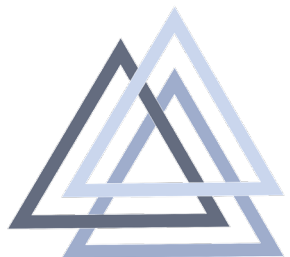
Learning Objectives

- Examine the rise in incidence of uterine rupture at a single institution
- Understand risk factors that may contribute to uterine rupture
- Explore suggestions for selecting appropriate TOLAC candidates
- Recommend updating TOLAC consent counseling



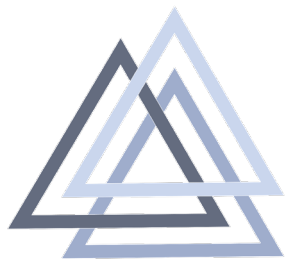
TOLAC

- Trial of labor after cesarean delivery (TOLAC) offers women the opportunity to attempt a vaginal delivery for subsequent pregnancies².
- A successful vaginal birth after cesarean delivery (VBAC) decreases maternal mortality, complications in future pregnancies, and overall cesarean delivery rates².
- The risk of uterine rupture is a potentially life-threatening complication of TOLAC attempts.



Uterine Rupture Counseling

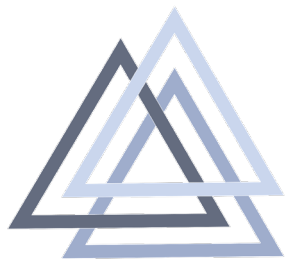
- Risk of uterine rupture with 1 prior c-section: $<1\%$ ^{1,2}
- Risk of uterine rupture with 2 prior c-sections: $1-2\%$ ²
- There is some data to suggest that induction of labor in TOLAC may increase the risk of uterine rupture².
- There have been no antenatal factors identified to predict uterine rupture².



Examining Uterine Ruptures at a Single Institution

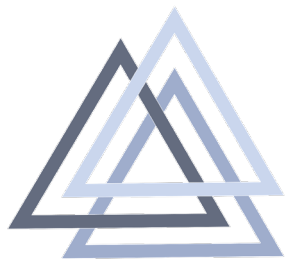
Uterine Rupture Rates at Single Institution

Year	Number of TOLACs	Number of Uterine Ruptures	Rate of Uterine Rupture
2019	90	1	1.11%
2020	86	0	0%
2021	80	1	1.25%
2022	133	3	2.25%
2023	—	5	—



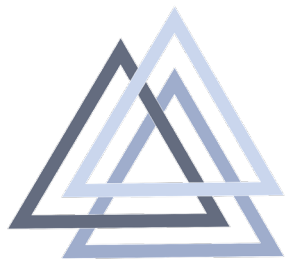
Case 1

- History: G2P1001, G1: PCS at term for non-reassuring FHTs
- Labor: TOLAC induction w/ mechanical balloon dilation, oxytocin, AROM
- Outcome: RCS recurrent late fetal decelerations, shoulder pain
- Complications: partial uterine rupture, blood transfusion



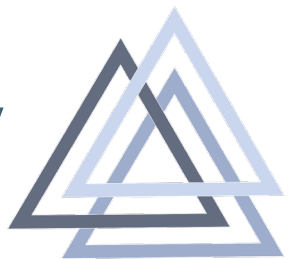
Case 2

- History: G3P2002, G1: PCS for non-reassuring FHTs, G2: RCS for breech presentation
- Labor: TOLAC induction, mechanical dilator balloon, oxytocin, AROM
- Outcome: RCS for fetal terminal bradycardia
- Complications: complete uterine rupture, blood transfusion



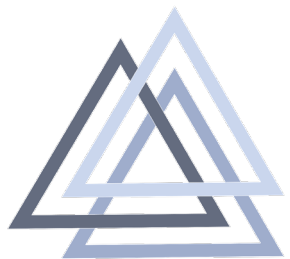
Case 3

- History: G2P0101, G1: PCS for non-reassuring FHTs
- Labor: PROM, augmentation with oxytocin
- Outcome: forceps-assisted vaginal delivery for fetal bradycardia
- Complications: 3rd degree perineal laceration, Ex-lap on postpartum day 1 for abdominal pain and bleeding, complete uterine rupture, blood transfusion
- Postpartum complications: anxiety, panic attacks, fecal and urinary incontinence



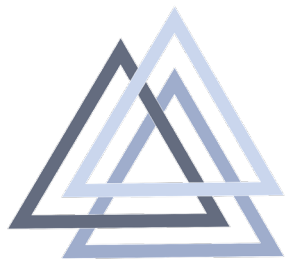
A 2023 Preview

- 5 cases of uterine rupture (informal review)
 - 5/5 IOL with Pitocin
 - 3/5 used mechanical dilator balloon for cervical ripening
- Suspect a uterine rupture rate at our institution for 2023 to be 2-3% or higher



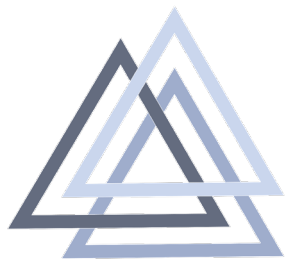
Conclusions

- Commonalities
 - Induced or augmented, none presented in spontaneous labor
 - Use of oxytocin
 - Use of mechanical dilation balloon for cervical ripening
 - Outcomes resulted in RCS for non-reassuring FHTs, maternal symptoms concerning for uterine rupture



Conclusions

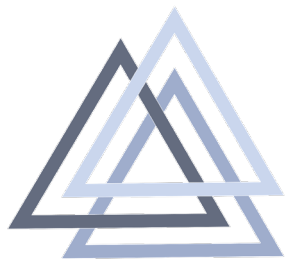
- Confounders
 - Overall rise in number of TOLACs at our institution
 - Better documentation in electronic medical records
 - Rising number of patients with history of c-section



Understanding Risk Factors and Changing TOLAC Counseling

TOLAC Candidates

- Factors to consider
 - Prior uterine scar type
 - Previous cesarean indication
 - TOLAC success prediction
 - Number of prior cesareans
 - Spontaneous labor vs. induction / augmentation



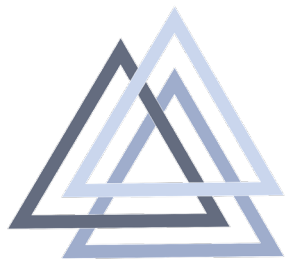
TOLAC Counseling

The risk of uterine rupture must be carefully considered and discussed during antenatal counseling with shared decision-making with the patient. At our institution, we are continuing to take a closer look at the ongoing TOLAC cases for risk factors for uterine rupture. We are currently studying the impact of short-interval pregnancy on TOLAC outcomes and labor management. We are also considering a change in counseling to quote a uterine rupture rate of closer to 2% rather than quoting <1%.



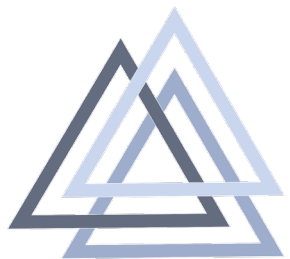
What next?

- Formally review 2023 uterine rupture cases
- Evaluate interpregnancy intervals in TOLAC patients
- Evaluate labor management in TOLAC patients that resulted in uterine rupture
- Change counseling
- Change policies within Labor & Delivery



Thank You

- Research mentors: Dr. Candice Holliday and Dr. Tracy Roth
- Dr. Carey Winkler for the idea to investigate our institution's uterine rupture rate
- Medical students: Taylor Coe



References

1. Erfani, H. & Shamshirsaz, A. A. Outcomes Associated with Trial of Labor After Cesarean Delivery. 50 Studies Every Obstetrician Should Know. Oxford University Press, January 2021.
2. ACOG. Vaginal Birth After Cesarean Delivery. ACOG Practice Bulletin No. 205. Obstet Gynecol 2019.

