High-dose misoprostol with subsequent Foley versus low-dose misoprostol with concurrent Foley for cervical ripening

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Background

- The FOR MOMI trial showed low-dose misoprostol with concurrent Foley increased likelihood of vaginal delivery and shortened the median time to delivery when compared to either method alone, prompting many institutions to adopt this protocol

Objective

- To compare labor outcomes with low-dose misoprostol and concurrent Foley versus high-dose misoprostol and subsequent Foley

Study Design

- Retrospective before-and-after study of nulliparous women with non-anomalous, singletons with term deliveries at a single institution in two separate two-year periods before and after changes in IOL protocol:
  - **High-dose**: 50-100 mcg PO every 4 hours with subsequent Foley between May 2015 – April 2017
  - **Low-dose**: 25 mcg PO every 2 hours with concurrent Foley between June 2017 – May 2019
- **Primary outcome**: time from misoprostol start to delivery
- Kruskal-Wallis test compared median values, and chi-squared tests compared proportions. Multivariate logistic regression generated adjusted odds ratios
- aOR were adjusted for maternal age, parity, DM, and. HTN.

Results

- 1,496 women met the inclusion criteria.
  - n = 698 in high-dose group
  - n = 798 in low-dose group
- **No statistically significant differences** in
  - **Time to delivery**
    29.1 hr high-dose vs 29.9 hr low-dose (P = 0.67)
  - **Rate of any cesarean**
    30% high-dose vs 26% low-dose (P = 0.08)
    RR 0.8 (95% CI 0.74-1.02)
    aOR 0.8 (95% CI 0.63-1.00; P = 0.06)
  - **Rate of cesarean for fetal indications**
    11% high-dose vs 8% low-dose (P = 0.145)
    RR 0.8 (95% CI 0.56-1.08)
    aOR 0.7 (95% CI 0.52-1.05, P = 0.09)

Conclusion

- No difference in time to vaginal delivery or likelihood of vaginal delivery with high-dose misoprostol + subsequent Foley versus low-dose misoprostol + concurrent Foley
- Shared-decision making model may be applied regarding timing of Foley catheter placement and dosing of misoprostol

Implementing an evidence-based cervical ripening protocol did not change time to delivery

Questions?
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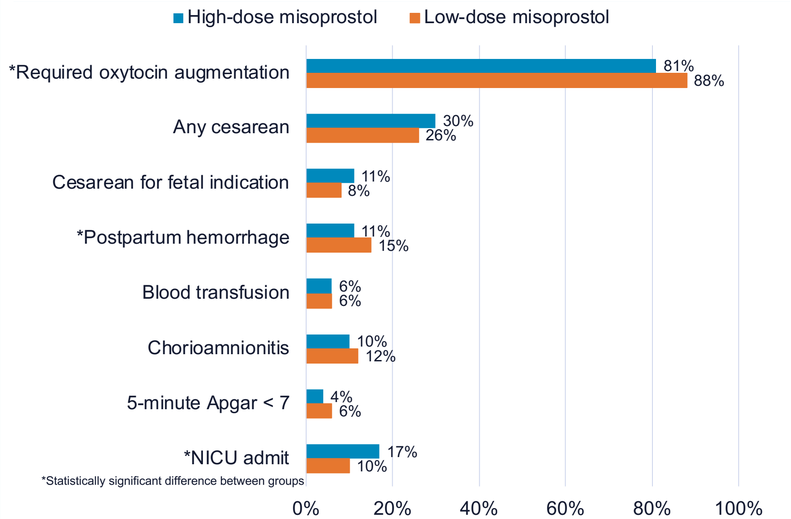
	High-dose misoprostol (n = 698)	Low-dose misoprostol (n = 798)	P value
Maternal age (yrs)	33 (30-37)	34 (31-37)	0.210
Race			0.757
Caucasian	354 (51%)	431 (54%)	
African American	33 (5%)	31. (4%)	
Hispanic	63 (9%)	67 (8%)	
Asian	161 (23%)	182 (23%)	
Other	78 (11%)	80 (10%)	
Unknown	9 (1%)	7 (1%)	
Obese (BMI > 30 kg/m^2)	97 (14%)	95 (12%)	0.250
Chronic hypertension	49 (7%)	49 (6%)	0.493
Pregnancy-induced hypertension	256 (37%)	225 (28%)	< 0.001
Pre-existing diabetes	11 (2%)	14 (2%)	0.788
Gestational diabetes	185 (27%)	205 (26%)	0.720
Fetal growth restriction	28 (3%)	27 (3%)	0.567
Placental abruption	11 (2%)	16 (2%)	0.534
Gestational age at delivery (wks)	39.9 (38.7-41.1)	39.9 (39.0-41.0)	0.882



	High-dose misoprostol (n = 698)	Low-dose misoprostol (n = 798)	P value
Time from misoprostol start to delivery (hr)	29.1 (20.5-41.7)	29.9 (20.1-40.5)	0.689
Cumulative misoprostol dose (mcg)	150 (50-250)	100 (50-150)	0.0001
Number of misoprostol administrations	2 (1-3)	4 (2-6)	0.0001
Time from Pitocin start to delivery (hr)	16 (9.27-22.3)	15 (9.70-21.78)	0.817