Talking Points: The ARRIVE Trial[1]

ABOUT THE STUDY:

- Randomized controlled unmasked trial
- Multicenter, 41 hospitals participating in the Maternal-Fetal Medicine Units Network of the Eunice Kennedy Shriver National Institute of Child Health and Human Development
- Low-risk nulliparous women, singleton pregnancy, vertex position, reliable due date confirmed by early ultrasound, no medical induction for induction
- 3062 women assigned to be induced (IOL group) at 39 weeks, 0 days to 39 weeks, 4 days
- 3044 women assigned to expectant management (EM group) – no elective induction before 40 weeks, 5 days, birth or induction initiated before 42 weeks, 2 days)

HYPOTHESIS: "That elective induction of labor at 39 weeks would result in a lower risk of a composite outcome of perinatal death or severe neonatal complications than expectant management among low-risk nulliparous women."[1]

STUDY CONCLUSIONS: "Induction of labor at 39 weeks in low-risk nulliparous women did **not** result in a significantly lower frequency of a composite adverse perinatal outcome, but it did result in a significantly lower frequency of cesarean delivery."[1]

OTHER STUDY OUTCOMES	IOL GROUP	EM GROUP	COMMENTS
Cesarean rate	18.6%	22.2%	According to nurse researcher, Rebecca Dekker, induction at 39 weeks (in this study) reduced the risk for cesarean by 16%. She points put that there are other more effective ways to decrease the cesarean rate such as continuous support (25%) or using intermittent auscultation (39%).[2]
Preeclampsia/Gestational hypertention *In this study, gestational hypertension was defined simply as "blood pressure elevation after 20 weeks in absence of proteinuria or other systematic findings as defined below."*[3]	9%	14%	ACOG defines gestational hypertension as "a systolic blood pressure 140 mm or more or a diastolic blood pressure of 90 mm or more, or both, on two occasions at least 4 hours apart after 20 weeks of gestation, in a woman with a previously normal blood pressure."[4]
Neonatal respiratory support needed within 72 hours of birth	3%	4.2%	No difference between the two groups in the number of babies admitted to the NICU.

CAUSES FOR CONCERN

- "More than 50,000 women were screened for eligibility; more than 44,000 were excluded; and more than 16,000 [73%] declined to participate. Data from the National Center for Health Statistics suggest that trial participants differed from the general population of women who delivered in the US in 2016."[5] [Thus, results may not be generalizable to other populations.]
- "If labor guidelines and [ACOG] induction failure definitions are not adopted [by providers offering elective induction at 39 weeks], the cesarean rates will likely rise significantly."[6]

ADDITIONAL KEY POINTS

- Almost all labor inductions require additional medical interventions such as continuous electronic fetal heart rate monitoring, IV fluids, and epidural analgesia.
- ACOG emphasizes that up to 24 hours or more should be allowed for latent labor and that oxytocin should be administered for at least 12 to 18 hours after membrane rupture before deeming the induction a failure.[7]
- Routine elective induction at 39 weeks is not appropriate for the low-risk woman who plans a normal, physiologic birth using nonpharmacologic pain management strategies.

SEE REVERSE SIDE FOR PROFESSIONAL ORGANIZATION RESPONSES AND REFERENCES

PROFESSIONAL ORGANIZATION RESPONSES

American College of Nurse-Midwives

"The American College of Nurse-Midwives (ACNM) affirms its support for the promotion of normal healthy physiologic birth and a women's right to self-determination as we acknowledge the publication of the ARRIVE trial results..."

ACNM. (August 9, 2018). ACNM responds to release of ARRIVE Trial study results: Acknowledges quality of study but raises concerns about potential for misapplying results. https://bit.ly/2LkrDoi

American College of Obstetricians and Gynecologists (ACOG)

"ACOG and SMFM have reviewed the published results of the ARRIVE Trial and determined that it is reasonable for obstetric care providers to offer an induction of labor to low-risk women after discussing the options thoroughly, as shared decision-making is a critical element."

ACOG & SMFM. (August 8, 2018). Leaders in obstetric care respond to published results of the ARRIVE Trial. https://bit.ly/2H06lrO

Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN)

AWHONN supports the following...

- Collaboration between nurse leaders and the maternity care team to establish and implement policies and practices that support spontaneous labor, ..."

AWHONN. (2019). AWHONN position statement: Elective induction of labor. *JOGNN, 48*(2), 227-229.

Society of Obstetricians and Gynaecologists of Canada (SOGC)

"However, it is not appropriate to recommend elective induction solely to reduce the risk of caesarean section in an otherwise low risk nulliparous patient at this time."

SOGC. (2018). SOGC statement – ARRIVE Trial. https://bit.ly/2HHVvYz

REFERENCES

1. Grobman, W.A., et al. (2018). Labor induction versus expectant management in low-risk nulliparous women. *New England Journal of Medicine, 379*(6), 513-523.
2. Dekker, R. (2018). *Evidence Based Birth. Evidence on: The ARRIVE trial.* https://evidencebasedbirth.com (You will need to provide your email address on the "Resources for Professionals" webpage to access the free handout.)
3. Grobman, W.A., et al. (2018). Labor induction versus expectant management in low-risk nulliparous women. *New England Journal of Medicine, 379*(6), 513-523. Supplementary Appendix.
4. Report of the National High Blood Pressure Education Program Working Group on high blood pressure in pregnancy. (2000). *American Journal of Obstetrics & Gynecology, 183*(1) S1-S22.
5. Greene, M.F. (2018). Editorials – Choices in managing full-term pregnancy. *New England Journal of Medicine, 379*(6), 580-581.
6. Main, E. for CMQCC. (February 8, 2018). Comments on the ARRIVE trial. https://bit.ly/2FYzL6A
7. ACOG. (2018). Practice advisory: Clinical guidance for integration of the findings of The ARRIVE Trial: Labor induction versus expectant management in low-risk nulliparous women. https://bit.ly/2oG3Y3G

ALSO RECOMMENDED

1. Amis, D. (2019). Healthy birth practice #1: Let labor begin on its own. *Journal of Perinatal Education, 28*(2), 68-80.
2. Goer, H. (August 14, 2018). Parsing the ARRIVE Trial: Should first-time parents be routinely induced at 39 weeks? *Connecting the Dots* (Lamaze International blog). https://bit.ly/2Vhr43d

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