

Randomized Double-Blind Clinical Trial of

Infusion vs. Bolus methods of Oxytocin administration (INBOX) Study

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Background

- Postpartum hemorrhage causes nearly 20% of maternal deaths [1]
- The optimal strategy for administering postpartum oxytocin is controversial.
- Bolus doses < 5 IU are effective at attaining adequate uterine tone with a significant reduction in adverse side effects [3, 4, 5].
- The standard at Stony Brook is an infusion of Oxytocin 18 IU/hour (0.3 IU/min) which has been proven effective in achieving adequate uterine tone. But time to uterine tone is long, 3-4 mins with this infusion [7].
- Estimated uterine blood flow is 500-700 mls/min, significant blood loss can occur with delayed uterine tone [8].

Hypothesis

• We hypothesize that bolus oxytocin is superior to infusion in time to achieving adequate uterine tone.



Study Design and Methods





Results







Figure 2. Intra-Operative Blood Loss in Bolus and Infusion Arms

ml (480-826), p=0.0438].





- There were no significant differences in patient demographics between the infusion and bolus groups.
- Bolus was equally effective at attaining adequate uterine tone as infusion at 2 minutes without additional side effects and less blood loss.
- Including the "Rule of 3's" format made communication structured and effective.

Conclusion

• In this double blinded randomized clinical trial, the administration of oxytocin by bolus was effective and reduced blood loss compared with administration by infusion. Prespecified safety endpoints were similar in both arms suggesting similar safety profiles for these two methods of administration.

References

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