

AWARD FOR THE BEST ORIGINAL RESEARCH PRESENTATION AT THE WCMSR BASED ON THE JUDGES AVERAGE SCORES, 2nd PLACE:**04. EFFICACY OF RECTAL MISOPROSTOL VERSUS OXYTOCIN ON REDUCING BLOOD LOSS DURING CESAREAN SECTION: A META-ANALYSIS OF RANDOMIZED CLINICAL TRIALS**

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 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=3987s>

INTRODUCTION: Blood loss is an inevitable complication and a major contributor to maternal morbidity and mortality at cesarean deliveries. Several trials have investigated the use of Misoprostol to prevent hemorrhage-related complications in women undergoing cesarean section. **OBJECTIVE:** We aimed to detect a potential preference regarding the efficacy and safety of rectal Misoprostol over Oxytocin as a uterotonic agent. **METHODS:** We searched PubMed, Scopus, Web of Science, Cochrane, and other databases for the relevant trials from inception to September 2022. We included randomized clinical trials (RCTs) that compared rectal Misoprostol versus Oxytocin to control bleeding in women undergoing cesarean delivery. Our primary outcomes were the intra- and postoperative blood loss, and hemoglobin drop after delivery. Secondary outcomes included need for blood transfusion, need for additional uterotonics, difference in operative time, as well as safety outcomes such as the incidence of shivering, pyrexia, nausea, and vomiting. **RESULTS:** Our search strategy revealed 1007 unique records, of them we retrieved full texts of 19 articles to check their adherence to our eligibility criteria. Nine RCTs with 1490 participants were included. We found a significant reduction in postoperative blood loss (MD: -27.9 mL; 95% CI: -53.8, -2.1, $p = 0.03$), and Hb drop after delivery (MD: 0.11 mg/dl, 95% CI: 0.04, 0.19, $p = 0.003$). There is no significant difference regarding intraoperative blood loss, operative time, need for blood transfusion, or need for additional uterotonics. We could not find a significant difference between the 2 groups regarding safety outcomes except for a higher shivering incidence in Misoprostol group (RR: 2.99; 95% CI: 1.69, 5.29, $p = 0.002$). **CONCLUSION:** We found a significant reduction in postoperative blood loss with a potential favorable safety profile in women who administered rectal Misoprostol compared to Oxytocin administration. Our findings recommend and prefer rectal Misoprostol as a cheaper and effective uterotonic agent over Oxytocin which is expensive and requires adequate cold chain for transportation and storage.

Key words: Misoprostol; Oxytocin; Cesarean Section; blood loss.