

Does prophylactic manual rotation of OP and OT positions in early second stage of labor decrease operative vaginal and/or CDs?

Yes, trial of prophylactic manual rotation of an occiput posterior (OP) or occiput transverse (OT) position at full dilation decreased the risk of operative delivery (vaginal or cesarean), according to a randomized clinical trial. Additionally, a trial of prophylactic manual rotation reduced the length of the second stage of labor. No significant changes occurred in maternal or neonatal complications due to the trial of rotation.

Blanc J, Castel P, Mauviel F, et al. Prophylactic manual rotation of occiput posterior and transverse positions to decrease operative delivery: the PROPOP randomized clinical trial. Am J Obstet Gynecol. 2021;225:444.e1-444.e8. doi: 10.1016/j.ajog.2021.05.020.

EXPERT COMMENTARY

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Occiput posterior or occiput transverse positions are reported at a rate of 20% in labor, with 5% persistent at the time of delivery. These lead to a higher risk of maternal complications, such as cesarean delivery (CD), prolonged second stage, severe perineal lacerations, postpartum hemorrhage, chorioamnionitis, and operative vaginal delivery.

Several options are available for rotation to occiput anterior (OA) to increase the

likelihood of spontaneous delivery. These include instrument (which requires forceps or vacuum experience in rotation), maternal positioning changes, or manual rotation. Timing of manual rotation can be at full dilation (“prophylactic”) or at failure to progress (“therapeutic”), with the latter less likely to succeed.

Although the existing literature is somewhat limited, both the American College of Obstetricians and Gynecologists and the Society for Maternal-Fetal Medicine recommend consideration of manual rotation to reduce the rate of operative delivery. A recent study by Blanc and colleagues sought to add to the evidence for the effectiveness of manual rotation in reducing operative delivery.

Details of the study

The multicenter, open-label, randomized clinical trial included 257 patients at 4 French hospitals (2 academic, 2 community). The 126 patients in the intervention group underwent a trial of prophylactic manual rotation, while the 131 in the standard group had no trial of prophylactic manual rotation. The study’s primary objective was to determine

FAST TRACK

Options for rotation to OA position to increase the likelihood of spontaneous delivery include instrument, maternal positioning changes, and manual rotation

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WHAT THIS EVIDENCE MEANS FOR PRACTICE

In this study, a trial of prophylactic manual rotation of the occiput posterior or occiput transverse presentation decreased the rate of operative delivery and reduced the length of the second stage of labor without differences in maternal or neonatal complications. Obstetrical providers should consider this strategy to resolve the OP or OT presentation prior to performing an operative vaginal delivery or cesarean delivery. Simulation training in this maneuver may be a useful adjunct for both trainees and providers unfamiliar with the procedure.

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the effect of prophylactic manual rotation on operative delivery (vaginal or cesarean). The hypothesis was that manual rotation would decrease the risk of operative delivery.

The inclusion criteria were patients with a singleton pregnancy at more than 37 weeks, epidural anesthesia, and OP or OT presentation (confirmed by ultrasonography) in the early second stage of labor at diagnosis of full dilation. Manual rotation was attempted using the previously described Tarnier and Chantreuil technique, and all investigators were trained in this technique at the beginning of the study using a mannequin.

The primary outcome was vaginal or cesarean operative delivery. Secondary outcomes included length of the second stage of labor as well as maternal and neonatal complications.

Results. The intervention group had a significantly lower rate of operative delivery (29.4%)

compared with the standard group (41.2%). Length of the second stage was also lower in the intervention group (146.7 minutes) compared with that of the standard group (164.4 minutes). The 5-minute Apgar score was reported as significantly higher in the intervention group as well (9.8 vs 9.6). There were no other differences between the groups in either maternal or neonatal complications.

Study strengths and limitations

The strengths of this study included randomization and no loss to follow-up. The 4 different study sites with different levels of care and acuity added to the generalizability of the results. Given the potential for inaccuracy of digital exam for fetal head positioning, the use of ultrasonography for confirmation of the OP or OT position is a study strength. Additional strengths are the prestudy training in the maneuver using simulation and the high level of success in the rotations (89.7%).

The study's main limitation is that it was not double blinded; therefore, bias in management was a possibility. Additionally, the study looked only at short-term outcomes for the delivery itself and not at the potential long-term pelvic floor outcomes. The authors reported that the study was underpowered for operative vaginal delivery and cesarean delivery separately, as well as the secondary outcomes. Other limitations were the high frequency of operative vaginal delivery, low rate of consent for the study, and lack of patient satisfaction data. ●