



# Is it time to revive rotational forceps?

**Contemporary data suggest that it is.** When rotational instrumental delivery was compared with cesarean delivery in this 5-year retrospective cohort study, there was no difference by delivery method in the rates of delayed neonatal respiration, reported critical incidents, or fetal arterial umbilical pH of less than 7.1. The only differences were less blood loss and a lower risk of significant hemorrhage (>1.5 L) in the rotation group (odds ratio, 0.24; 95% confidence interval, 0.13–0.64).

Aiken AR, Aiken CE, Alberry MS, Brockelsby JC, Scott JG. Management of fetal malposition in the second stage of labor: a propensity score analysis. *Am J Obstet Gynecol.* 2015;212(3):355.e1–e7.

## ► EXPERT COMMENTARY

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The relative safety of instrumental rotations in the second stage of labor remains controversial. Older reports suggest an unacceptable risk of fetal injury, while recent studies demonstrate more favorable outcomes without significant fetal or maternal morbidity. This study by Aiken and colleagues goes one step further by using propensity analysis to adjust for the likelihood of receiving an attempted instrumental rotation.

## Details of the study

With a cohort of 833 women with second-stage positional abnormalities, Aiken and colleagues compared maternal and newborn outcomes associated with cesarean delivery (n = 534) with those of an attempted rotational procedure (n = 334). Among the

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attempted instrumental rotations, 299 (90%) were successful. By intention to treat, failed attempts at rotation and vaginal delivery were included in the instrumental rotation group. The authors relied on propensity analysis to adjust for selection bias.

## Strengths and weaknesses

The main strengths of this study are the relatively large sample size, the inclusion of failed procedures in the forceps group based on intention to treat, the robust approach to adjusting for the likelihood of undergoing an attempted rotation, and the contemporary nature of the cohort.

However, the study has 4 important limitations:

- More than 30% of rotations were attempted with vacuum devices. Many clinicians,

## WHAT THIS EVIDENCE MEANS FOR PRACTICE

Although this study does have limitations, it adds to the increasing number of contemporary reports suggesting that instrumental rotational procedures are safe. Though it is not without challenges, training in rotational forceps should continue.

» **WILLIAM H. BARTH JR, MD**

**FAST  
TRACK**

**Although not stratified by vacuum device or forceps, instrumental rotation in general was successful in 299 of 334 (90%) of attempts**



including me, eschew vacuum deliveries for rotation due to reported higher failure rates and more scalp lacerations or other trauma. The analysis was not stratified by whether the rotation was attempted with a vacuum or Kielland forceps.

- Information about maternal pelvic features, critical in determining the safety of any operative vaginal delivery, was not included. When the pelvis has anthropoid features, such as more room in the posterior segment, rotation is not needed and may be counterproductive. Android

features raise the likelihood of dangerous outlet obstruction and generally suggest the need for cesarean delivery.

- As Aiken and colleagues note, manual rotations followed by instrumental delivery from an occiput anterior position were not included.
- The study was not stratified by whether the abnormal position was occiput posterior (OP) or occiput transverse (OT). Although the degree of rotation is greater with OP position, operative vaginal delivery from OT can be far more challenging. ❌

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