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REBIRTH OF KIELLANDS FORCEPS

Hypothesis / aims of study
Kiellands forceps helps minimise the risk of the baby rotating back to the malposition, dis-impaction and cord prolapse that may be associated with manual rotation.
Aim:
To retrospectively assess maternal and neonatal morbidity associated with Kiellands forceps delivery.

Study design, materials and methods
A retrospective case notes review of 59 cases of successful Kiellands forceps from January 2012 until December 2012 was undertaken. Data were collected on indication for mid cavity rotational forceps, grade of operator, details regarding malposition, maternal morbidity (perineal trauma, obstetric anal sphincter injury, blood transfusion, voiding dysfunction) and neonatal morbidity (facial bruising/trauma/palsy).

Results
Average age was 25.5 years (Range 16-41 years) and average BMI was 22 (Range 17-42).
81% (n=48/59) were Caucasian.
30%(n=18/59) had an induction of labour.
Average length of 2nd stage was 152.5 minutes (Range 5 minutes to 300 minutes).
39% (n=23/58) had a rotational forceps for prolonged 2nd stage, 20% (n=12/58) for prolonged 2nd stage and abnormal CTG and 24% (n=14/58) for foetal distress.
The registrar was the primary operator in 72% of cases with 40% being done for direct occipito posterior position.
42% (n=25/59) were in occipito transverse (OT) position.
The direct technique of application was used in 39% (n=9/23) of OT positions.
All patients had an episiotomy. 15% (n=9/59) had a vaginal wall tear.
8% (n=5/59) patients had an OASIS.
Average blood loss estimated was 684 mls.
10% (n=6/59) needed blood transfusion.
11% (n=7/59) needed antibiotics for wound breakdown. All patients had a catheter post Kiellands forceps.
3% (n=2/59) needed catheterisation due to high post void residuals.
Average birthweight=3643gms (Range 2600-4670)
Average APGAR at 1 min: 7 (Range 3-10)
Average APGAR at 5 min: 9 (Range 8-10)
5% (n=3/59) neonates had a bruise to the face.
5% (n=3/59) needed 5 inflation breaths.
1 baby had a deep forcep mark and 1 baby had a facial palsy.
Post natal bladder care documentation was found to be unclear.

Interpretation of results
Prolonged 2nd stage formed the primary recorded indication for Kiellands forcepsThe registrar was the primary operator in 70% cases with adequate senior supervision.
Wandering technique for application was preferred in OT positions. 8% OASIS rate was noted in this group of cases audited.
Post natal bladder care documentation was incomplete.

Concluding message
Kielland forceps should only be undertaken in carefully chosen cases by experienced clinicians as it brings with it the risks of both maternal and foetal morbidity. Post partum bladder care protocol must be carefully undertaken to prevent the risk of voiding dysfunction.

References
1. Bahl, R., et al., Maternal and neonatal morbidity in relation to the instrument used for mid-cavity rotational operative vaginal delivery: a prospective cohort study. BJOG : an international journal of obstetrics and gynaecology, 2013. 120(12): p. 1526-32.

Disclosures
Funding: none **Clinical Trial:** No **Subjects:** NONE