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Does consultant attendance for a second-stage delivery in theatre make a difference?

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Introduction

Second-stage caesarean section (c/s) rates are rising and are a concern for the delivery in question and can negatively impact on a woman's future pregnancies and deliveries. Improved consultant supervision may increase operative vaginal delivery (OVD) rates and decrease the maternal and neonatal morbidity of a second-stage c/s.

Methods

A retrospective observational study assessing the impact of mandated consultant presence in theatre for second-stage births following a policy change in 2017. The primary outcome measure was mode of delivery and secondary outcomes were maternal and neonatal morbidity. Cases pre and post policy change (Feb to Sep in 2016 and 2018) were identified from BOS. Statistical significance was conferred at $p<0.05$.

Results

- There were 84/2108 (4.0%) second-stage OT births in 2016 vs 104/2219 (4.7%) in 2018.
- Both groups had similar maternal characteristics, although a higher proportion of women were overweight in 2018.

	Primip	Attempted VBAC	AMA (≥ 40)	BMI (≥ 30)	No Antenatal risk factors	Spontaneous onset of labour
2016 (84 cases)	67 (79.7%)	8 (9.5%)	3 (3.6%)	18 (21.4%)	46 (54.8%)	43 (51.2%)
2018 (104 cases)	80 (77.0%)	14 (13.5%)	1 (1.0%)	33 (31.1%)	52 (50.0%)	50 (48.1%)

- Consultant attendance increased from 67% to 88% of deliveries (p=0.0007) and resulted in a trend towards increased attempted OVD [65/84 (77%) vs 83/104 (80%) (p= 0.7223)], and OVD success [46/65 (71%) vs 66/83 (80%) (p= 0.2496)].

Results continued

- Ultrasound use to confirm fetal position prior to attempted delivery increased significantly from 14/84 (17%) to 46/104 (44%) (p= 0.0001).
- Malposition complicated 46/84 (54%) vs 45/104 (43%) births. Attempted OVD in women with a malposition was slightly higher in 2018 (93% vs 96%), with no statistically significant change in the use of Kiellands forceps [11/46 (24%) vs 8/45 (17%) (p=0.61)].
- Rates of unsuccessful OVD on Birthing Suite resulting in an emergency transfer to OT remained unchanged 7/84 (8%) vs 9/104 (9%).
- There was one bladder and one ureteric injury at second-stage c/s in 2016 and none in 2018.
- PPH rates (≥ 500mls) were not statistically different [40/84 (48%) to 60/104 (58%) (p= 0.1876)]. There was a trend towards less blood transfusion 6/40 (15%) vs 4/60 (7%) (p=01924), and increased iron infusions 6/40 (15%) and 20/60 (33%) (p=0.0616) in 2018.
- Changes observed in the rate of OASIS-injury post OVD were not of statistical significance [2/46 (4%) to 10/66 (15%) (p= 0.1179)].
- Neonatal injury following attempted OVD was similar between the groups. There were no cases of neonatal injury associated with c/s in either group.

Discussion

With improved consultant supervision, there was a trend towards increased OVD and less morbidity at second stage c/s. Consultant presence and participation in complex operative obstetrics cases, offers trainees a valuable learning opportunity.