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Letter to the Editor: *Short-term neonatal outcomes of growth restricted infants by their mode of delivery*

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There is no evidence regarding the best mode of delivery of the intrauterine growth restricted (IUGR) fetus. There are no studies comparing caesarean section (CS) with vaginal delivery (VD). It is not known how much additional hypoxaemia labour and VD might cause and effect outcome of the already compromised fetus. We performed a retrospective study with the aim to compare the immediate/short-term outcomes of IUGR infants (< 10th centile) with birthweight < 1500 g depending on the mode of delivery. All IUGR infants born at the Royal Women's Hospital, Brisbane, from 1996 to 1998 were included in the study. Infants born by emergency caesarean section (CS) for fetal distress, antepartum haemorrhage, chorioamnionitis or cord complications were excluded. Outcome measures included: Apgar scores, need for intubation for resuscitation at birth, metabolic acidosis, ventilation requirements, mortality to discharge and chronic lung disease (O2 requirement at 36 weeks corrected). There were 153 neonates born with the above mentioned criteria. Thirteen (8%) were delivered vaginally and 140 (92%) by CS. The IUGR was known antenatally in 7/13 (54%) of the VD group and in 103/140 (74%) of the VD group (p = 0.19. Fisher's exact test). We conclude, therefore, that most IUGR infants are currently born by caesarean section. Those infants delivered vaginally are bigger and more mature. Any valid conclusions are difficult due to small numbers of infants born by VD and multiple confounders. From these data, the VD infants are not worse off than the CS infants. However, we cannot say that infants who were delivered by CS would have been better or worse off if delivered by VD. A larger study is needed, in increasing order of desirability; a retrospective cohort, a prospective cohort or a RCT.

	SVD		CS
Mean (standard deviation)			
Gestational age (weeks)	32.9 (3.3)	p = 0.3*	30.6 (32.6)
Birthweight (grams)	1244 (310)	p = 0.02*	1002 (332)
Number (%)			
Antenatal steroids	7 (54)	p = 0.20†	101 (72)
Intubated for resuscitation	5 (38)	p = 1.0†	55 (39)
Base excess (1st 12 hours) < -5	1 (8)	p = 0.30†	31 (22)
Died	0 (0)	p = 0.36†	16 (11)
In O_2 at 36 weeks	1 (8)	p = 1.0†	15 (11)
Median (IQR)			
1 minute Apgar score	6 (2.5–8.5)	p = 0.44‡	7 (5–8)
5 minute Apgar score	9 (7–9)	p = 0.19‡	9 (8–9)
Total time IPPV hours	0 (0–0)	p = 0.04‡	18 (0–212)
Total time O2 hours	2 (0–22)	p = 0.05‡	45 (2–329)
Max FiO_2 (1st 12 hours)	0.27 (0.21–0.3)	p = 0.01‡	0.40 (0.27–0.6)

* = Student's t-test; † = Fisher's exact test; ‡ = Mann-Whitney U test