

BREATHING AND CRYING BY NEWLY BORN PRETERM INFANTS IN AN ERA OF DELAYED CORD CLAMPING.

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INTRODUCTION

The majority of newly born preterm infants breathe and cry after immediate cord clamping (ICC).¹ Guidelines recommend delayed cord clamping (DCC) for at least 30 seconds for infants who do not require immediate resuscitation.² Little guidance is given regarding the timing of cord clamping for preterm infants requiring resuscitation. It is not known whether DCC affects the rate of crying and breathing.

AIMS

To study breathing and crying by extremely preterm infants after cord clamping in an era of DCC

METHODS

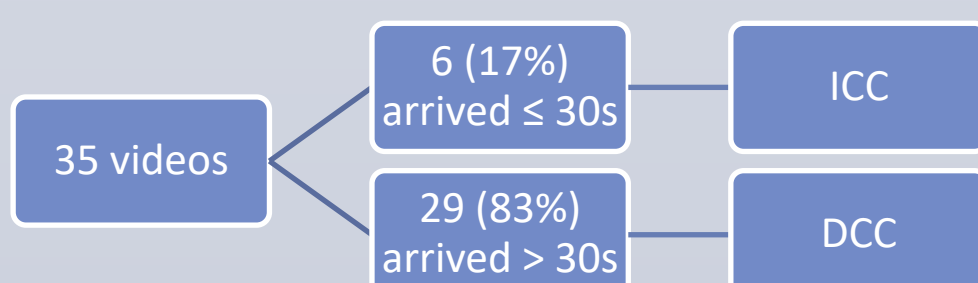
- Observational study
- Tertiary maternity centre (NMH)
- Videos of infants < 28 weeks or < 1000g (10.16 – 03.18)
- Aim for cord clamping at >60 secs (CPAP/PPV not provided)
- Determined
 - Time of birth
 - Time infant arrived to resuscitaire (proxy for timing of cord clamping)
 - Presence of audible cry before respiratory support
 - Presence of visible breathing before respiratory support
- Data analysed with SPSS
- Ethical approval and parental consent



Figure 1. Digital video camera attached to resuscitaire using tripod arm

RESULTS

- 109 videos recorded between October 2016 & March 2018
- 35 of eligible infants [mean (SD) GA 27 (2) weeks, BW 890 (200) g]



	ICC N=6	DCC N=29
GA, mean (SD), wk	26 (1.6)	27 (1.5)
BW, mean (SD), g	890 (252)	890 (182)
Arrival to resuscitaire, mean (SD), s	24 (8)	81 (10)

Figure 2. Patient characteristics at study entry

Immediate cord clamping ≤ 30 s

No. (%)	Cried	Breathed	Neither breathed nor cried
Total, n=6	4 (67)	6 (100)	0

Delayed cord clamping > 30s

No. (%)	Cried	Breathed	Neither breathed nor cried
Total, n=29	20 (69)	26 (90)	3 (10)
GA ≥ 26, n=21	15 (71)	18 (86)	3 (14)
GA < 26, n=8	5 (63)	8 (100)	0 (0)
BW ≥ 750g, n=23	17 (74)	22 (96)	1 (4)
BW < 750g, n=6	3 (50)	4 (67)	2 (33)

Subsequent DR support

- Respiratory support given by mask to all 35 infants
- Five (14%) infants were intubated in the DR
 - 2/6 infants who arrived ≤ 30s
 - 3/29 infants who arrived > 30s
- Thirty (86%) infants transferred to NICU on CPAP

CONCLUSIONS

- Most extremely preterm infants cried and breathed after DCC before respiratory support was given

REFERENCES

1. O'Donnell CP KC, Davis PG, Morley CJ. Crying and breathing by extremely preterm infants immediately after birth. *The Journal of pediatrics*. 2010;156(5):846-847.
2. Wyllie J, Perlman JM, Kattwinkel J, et al. Part 7: Neonatal resuscitation: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. *Resuscitation*. 2015;95:e169-201.