

Stabilization of preterm babies by skin-to-skin contact at birth; a randomized controlled pilot study

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Fig 1: Baby boy born at 28+2 weeks + days, BW 1,3 kgs, stabilized skin-to-skin

Conclusion

Skin-to-skin contact (SSC) between the preterm newborn and a parent immediately after birth is an alternative to separation for care on a resuscitaire or in an incubator or bed. We found slightly lower body temperatures in the SSC group.

Introduction

Skin-to-skin contact (SSC) is the major component of Kangaroo-Mother-Care (KMC). KMC is recommended for all low-birth-weight babies as soon as stable. (1) There is a lack of knowledge of the effects of SSC on the unstable low-birth-weight or preterm newborn. (2)

Methods

49 neonates born at 28+0 – 33+6 weeks + days at the delivery units at Danderyd Hospital in Stockholm were randomized to immediate SSC or conventional care. The intervention group was kept in SSC for the first hour of life

Primary outcome

Infants in the SSC group had a lower mean body temperature at one hour compared to the control group; 36.29° C (SD 0.52, range 34.4-36.7) versus 36.66° C (SD 0.44, range 36-37.3) (p=0.02), i.e a mean difference of 0.37° C. With non-parametric testing this difference was not seen.

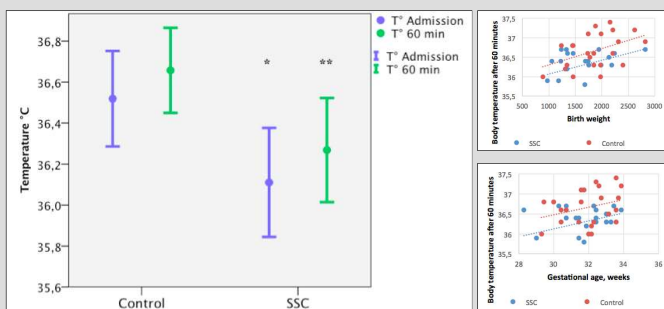


Fig 2: Primary outcome; body temperature at admission to neonatal unit and at 1 hour

Secondary outcomes

We found no difference in time with respiratory support. There was a trend towards more hypoglycaemia in the SSC group.

	Control (n = 26)	SSC (n = 23)
Secondary outcomes		
Time on any respiratory support: days, mean (SD)	5.4 (9)	5.5 (12.4)
Hypoglycemia < first 24h, n patients (%)	9 (35)	14 (61)
Lowest p-glucose if <2.6: mean (SD)	1.7 (0.8)	1.7 (0.6)
Other neonatal variables		
Apgar 1 min: mean (SD)	8.2 (1.4)	7.7 (1.8)
Apgar 5 min: mean (SD)	7.7 (1.8)	8.2 (2.3)
Apgar 10 min: mean (SD)	9.4 (1)	9.6 (0.8)
Ventilation during stabilization, n (%)	6 (23)	8 (35)
Oxygen saturation at 5 min: mean (SD)	78 (18)	75 (18)
Age when oxygen sat >90: minutes, mean (SD)	9 (5)	11 (6)
Surfactant, n (%)	7 (27)	5 (21)
Total CPAP time: days, mean (SD)	3.1 (3.4)	3.3 (3.4)
Central lines (umbilical venous or arterial), n (%)	6 (23)	8 (35)
Age on admission: minutes, mean (SD)	32 (10)	30 (9)
Total time received SSC: minutes, mean (SD)	13.3 (15)	43.5 (22)

Fig 3: Secondary outcomes; time with respiratory support and hypoglycaemia

References

1. WHO 2003
2. Conde-Agudelo et al 2016

Our next step will be to study skin-to-skin contact until stabilization. Preterm newborns will be kept in randomization arm until they meet stabilization criteriae.

