

Abstract PS-226 Table 1

	TP			p Value	SIB			p Value
	40	60	80		40	60	80	
VR [†]	39.7(0.3)	59.8(0.5)	79.8(1)	< 0.001**	39.8(0.2)	59.8(0.4)	79.6(0.7)	<0.001**
Inspiratory tidal volume [†]	27.9(16.6)	22.6(7.4)	19.3(4.1)	< 0.001*	33.4(17.7)	25.8(9.7)	24.4(5.1)	<0.001*
Mean Airway Pressure [†] (MAP)	8.9(2.1)	11(1.5)	11.5(1.6)	< 0.001*	5(2)	6.5(1.8)	8.2(1.7)	<0.001*
I/E Ratio [†]	0.26(0.25)	0.43(0.8)	0.48(0.18)	< 0.001*	0.35(0.25)	0.45(0.2)	0.67(0.23)	<0.001*

† Mean (SD) * RM ANOVA **RM ANOVA on ranks

statistically associated with AR. The MLR correctly classified 87% of the observations.

Conclusion NB of pregnant women presenting the following RF: GA < 37, EC, MFL, CC, FB, AP, MSAF, ECS, Ga and PROM (Premature rupture of membranes) >18 h have an increased need of Advanced Resuscitation (AR). Team trained to should be present at the delivery for pregnant women with the above risk factors.

MLR to AR

PS-226 EFFECTS OF DIFFERENT VENTILATION RATE (VR) TARGETS IN A MODEL OF NEONATAL MANUAL POSITIVE PRESSURE VENTILATION (PPV)

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Background Current recommendations for manual PPV in the delivery room allow a VR range of 40–60 ventilations/min. However, not enough studies have explored the effects of VR on resuscitation.

Objective To evaluate the effect of different VR targets on other ventilatory variables during manual PPV.

Methods 20 physicians manually ventilated an intubated neonatal manikin with both a self-inflating bag (SIB) without a PEEP valve and a T-piece resuscitator (TP). Peak inspiratory pressure

(PIP) target was 25 cmH₂O, PEEP was set to 5 on the TP and flow was kept at 8 l/min. VR (40, 60 and 80 vent/min) was paced by a metronome. Both, VR targets and PPV device sequences, were randomly assigned. Variables were compared by one-way repeated measures ANOVA.

Results Participants performed 9450 ventilations in 6 series of 90 seconds. For both devices there were no significant modifications in PIP and inspiratory time (T_i) between VR targets.

Conclusions Higher VR increased I/E ratio and provided higher MAP despite similar PIP. Further studies are needed to evaluate if targeting VR can influence the response to PPV in delivery room.

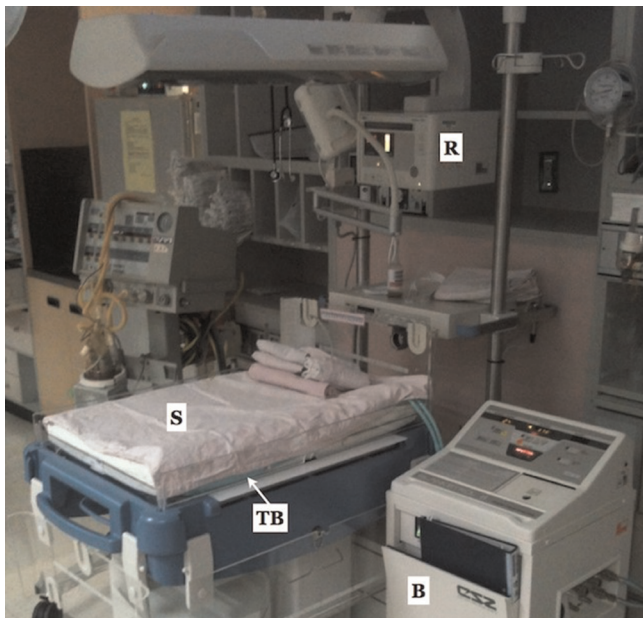
PS-227 A RANDOMISED TRIAL OF USING THERMAL BLANKET TO IMPROVE THERMOREGULATION AMONG PRETERM INFANTS

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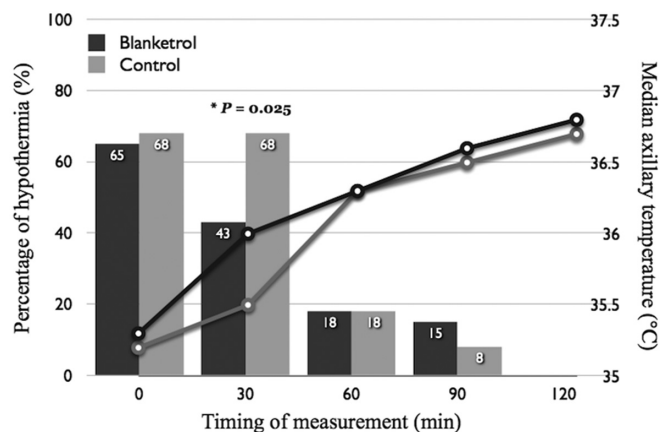
10.1136/archdischild-2014-307384.526

Background Thermal protection is critical in caring very low birthweight (VLBW).

Methods VLBW infants born at Chang-Gung Memorial Hospital were randomly assigned to TB or control group from February to July 2013. All infants were placed on a pre-warmed radiant warmer upon admission. For TB group, blanket of Blanketrol® II (Cincinnati Sub-Zero Products) was additionally applied (Figure 1) and system temperature was set 37°C. Individual's temperature, heart rate, mean blood pressure (MAP), and oxygen saturation were measured immediately at admission and at 30th, 60th, 90th, 120th minute later, respectively. We defined hypothermia as temperature <36°C and hypotension as MAP < index infant's gestational age (GA).



Abstract PS-227 Figure 1



Abstract PS-227 Figure 2

Results Total 80 VLBW infants (mean GA 28.9 ± 3.0 weeks and birthweight 1062 ± 247 gm) were allocated at 1:1 ratio. There was no between-group demographic dissimilarity, and the percentage of hypothermia was identical at admission. At 30th minute, fewer infants in TB group had hypothermia (43% vs. 68% in control, $p = 0.025$) (Figure 2). These infants had significantly lower incidence of hypotension at 60th, 90th, and 120th minute, which associated with less dopamine use in the first 6 h of life (25% vs. 50%, $p = 0.016$).

Conclusion By making full use of thermal blanket to provide additional and consistent thermal protection for VLBW infants, the degree of hypothermia was significant decreased within the initial 30 min of admission, which related to fewer hypotensive cases and less dopamine usage.

PS-228

THE BABIES WHO UNEXPECTEDLY SURVIVE LONG-TERM AFTER WITHDRAWAL OF NEONATAL INTENSIVE CARE

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Background and aim Not all babies from whom neonatal intensive care (IC) is withdrawn die swiftly. We reviewed cases, characteristics, and outcomes of babies who unexpectedly survived for ≥ 1 week following IC withdrawal.

Methods Retrospective review of the medical notes of infants cared for in our NICUs in the period 1/7/06 to 31/12/13 who had IC withdrawn but who unexpectedly survived for ≥ 1 week. Babies with trisomies were excluded. Our study had prior research ethics approval.

Results We identified 9 long-term survivors (6 term, 3 preterm). 8 had a main diagnosis of grade 3 hypoxic ischaemic encephalopathy; 1 preterm infant had a diagnosis of myelomeningocele and hydrocephalus. All had abnormal neuroimaging prior to planned IC withdrawal. IC was withdrawn with parental agreement at median 5 days postnatal age (range: 1–9 days). The possibility of long-term survival had been broached by clinicians prior to IC withdrawal in only 2 of the 9 cases. Median age at discharge/transfer from NICU was 10 days (range: 1–31 days) and destination was home ($n = 3$) or hospice ($n = 6$). 4 infants died at ages ranging between 19–66 days. Yet remarkably, 5 infants remain alive to date with current ages ranging between 10 months and 5.3 years, but all have cerebral palsy.

Conclusion Unexpected long-term survival after neonatal IC withdrawal is neither predictable nor uncommon. Significant disability in survivors is invariable. Even if protracted survival is considered very unlikely, the possibility should always be specifically mentioned during the sensitive discussions with parents that precede IC withdrawal.

PS-229

FACTORS INFLUENCING UPTAKE OF NEONATAL BEREAVEMENT SUPPORT SERVICES – A COMPARISON OF TWO TERTIARY NEONATAL CENTRES IN THE UK

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Background and aims Demise of a baby has profound consequences on the parents and providing appropriate support is the responsibility of multi-disciplinary team.¹

Aim To compare the uptake of bereavement services between two tertiary neonatal units (NNU), and to investigate factors influencing it.

Methods The medical and bereavement records of all neonatal deaths from January 2006 to December 2011 studied. Data collected: parent and infant characteristics, mode of death and bereavement follow-up. The categorical data was compared by chi-square or Fisher's exact test and continuous data by Wilcoxon signed-rank test using SPSS 22.0.

Results 297 babies (182 in NNU1 and 115 in NNU2) were studied. Significantly higher proportion of NNU1 parents (61%) attended bereavement follow-up compared to NNU2 (34%; $p < 0.01$). The number of parents married/co-habiting ($p = 0.01$), worse obstetric history with more stillborn/miscarriages ($p = 0.03$) and non-Caucasian parents from lower socio-economic status ($p = 0.01$) was significantly higher in NNU1. More infants had care withdrawn in NNU2 ($p < 0.01$). There was no significant difference in rest of the infant and parent characteristics studied. Among the group who availed bereavement services ($n = 149$), significantly more infants were inborn ($p = 0.01$), male ($p = 0.01$), had post-mortem examination ($p = 0.01$) and parents of higher socio-economic status ($p = 0.01$) and married or co-habiting ($p = 0.05$).

Conclusion Uptake of bereavement services varied across the NNUs. Significantly more parents of infants who were inborn, male, consented for post-mortem, from a higher socio-economic status and married or co-habiting attended bereavement follow up.

REFERENCE

1 Mancini A *et al.* BAPM Palliative care guideline 2014;Pg 17

PS-230

OUTCOME OF HYDROPS FETALIS IN A SINGLE TERTIARY CENTRE

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Background Hydrops fetalis is a potentially lethal condition diagnosed on the basis of excess fluid accumulation in at least two potential spaces including ascites, pericardial effusion, pleural effusion, or skin. Data on the prognosis of this condition are limited.

Aim To describe the outcomes of infants born with hydrops fetalis in a single centre over an 11 year period.

Method We performed a retrospective case review of inborn neonates diagnosed with hydrops fetalis admitted to the neonatal unit (NICU) at The Royal Women's Hospital between 2001 and 2012. Cases were identified through a search of neonatal and obstetric databases. Data were extracted from maternal and neonatal case files, along with electronic reports from pathology and radiology databases and the obstetric and neonatal databases.

Results We identified 193 fetuses with hydrops continuing beyond 17 weeks gestation. The outcome of 151 pregnancies occurred at the Royal Women's Hospital. 73 cases resulted in fetal death in utero or termination, in 23 cases the hydrops resolved antenatally and 52 infants were born alive with hydrops. The most common causes of hydrops were idiopathic