

Impact of minimally-invasive surfactant therapy in preterm infants at 29-32 weeks gestation

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ONLINE SUPPLEMENTAL TABLES

N	37
Gestation (weeks)	30 (29-32)
Birth weight (g)	1460 (1220-1610)
Time of treatment (h)	10 (5.4-19)
FiO₂ pre-treatment*	0.41 (0.075)
PCO₂ pre-treatment (mm Hg)*	53 (9.9)
RDS radiological score†	Mild-moderate: 3 (9%) Moderate: 17 (52%) Moderate-severe 8 (24%) Severe 5 (15%)
More than one catheterisation attempt	12 (32%)
SpO₂ below 80% for >10 sec	14 (38%)
Bradycardia for >10 sec	7 (19%)
Positive pressure ventilation required	13 (35%)
Surfactant dose (mg/kg)	104 (99-134)
FiO₂ 4 h after treatment*	0.24 (0.042)‡
PCO₂ 2 h after treatment (mm Hg)*	49 (7.6)‡
Intubated at any time	4 (11%)
Intubated in first 72 h	3 (8.1%)
Timing and reasons for intubation	31 h progressive RDS 35 h recurrent apnoea 43 h progressive RDS 176 h recurrent severe apnoea

Supplemental Table 1. Clinical and procedural details in infants receiving surfactant via thin catheter

Median (interquartile range) or n (%), unless otherwise stated. *Mean (SD). †pre-treatment X-ray available for scoring in 33 infants. ‡Differs from pre-treatment value, P<0.05, paired t-test.

	Epoch 1 All infants reaching treatment threshold	Epoch 2 All infants reaching treatment threshold	Epoch 2 Infants treated with surfactant by thin catheter
N	30	51	37
Surfactant therapy	14 (47%)	46 (90%)*	37 (100%)
Surfactant therapy via endotracheal tube	14 (47%)	12 (24%)*	2 (5.4%)
Duration of CPAP (days)	3.2 (1.9-4.9)	4.8 (3.2-6.1)*	4.8 (3.9-6.6)
Any MV	15 (50%)	16 (31%)	4 (11%)
Duration of MV (days)	0.13 (0-2.6)	0 (0-1.6)*	0 (0-0)
Average duration of MV (d per infant)	1.6	1.1	0.53
Duration of CPAP + MV (days)	5.0 (3.2-6.3)	4.9 (3.7-6.1)	5.0 (3.9-6.8)
Length of hospital stay (days)	52 (40-64)	49 (39-60)	52 (39-62)
Pneumothorax	8 (27%)	5 (9.8%)*	0 (0%)
BPD	0 (0%)	2 (3.9%)	2 (5.4%)
Died	0 (0%)	0 (0%)	0 (0%)
Died or BPD	0 (0%)	2 (3.9%)	2 (5.4%)
IVH grade III/IV	1 (3.3%)	0 (0%)	0 (0%)

Supplemental Table 2. Resource consumption and outcomes – infants reaching treatment threshold (Epochs 1 and 2) and infants receiving surfactant via thin catheter (Epoch 2).

Median (interquartile range) or n (%). *Differs from Epoch 1, $P < 0.05$. Treatment threshold in Epoch 2 was CPAP ≥ 7 cm H₂O and FiO₂ ≥ 0.35 at age < 24 h. Data for Epoch 1 are from infants identified to have reached the treatment threshold even though minimally-invasive surfactant therapy was not being used during this time.