**Table l: Demographic and morbidities of study subjects**

|  |  |  |
| --- | --- | --- |
| **S no.** | **Characteristics** | **Values n (%), n=347** |
| 1 | Gestational age (weeks)a, Mean (SD) | 38 (1) |
| 2 | Birth weight (grams)a, Mean (SD) | 2990 (386) |
| 3 | Male sex | 194 (56) |
| 4 | Small for gestational age | 17 (5) |
| 5 | Caesarean delivery | 221 (63) |
| 6 | Outborn | 171 (49) |
| 7 | Postnatal age of outborn at admission (hours)b, Median (IQR) | 1 (1-3) |
| 8 | Multigravida mothers | 125 (36) |
| 9 | **Maternal medical illness**  Pregnancy induced hypertension  Gestational diabetes mellitus | 71 (20)  19 (5) |
| 10 | **Maternal risk factors for infection**  Maternal fever  Premature rupture of membranes | 23 (6)  19 (5) |
| 11 | Abnormal NSTc | 202 (84%) |
| 12 | **Positive pressure ventilation at birth**  Bag and mask  Intubation | 121 (35)  48 (14) |
| 13 | APGAR 5 minutea, d, Mean (SD) | 8 (1) |
| 14 | Hypoxic Ischemic Encephalopathy stage 2/3  Therapeutic hypothermia | 67 (19)  50 (14) |
| 15 | Downes score at admission ≥4 | 163 (47) |
| 16 | FiO2 ≥30% 1 hour after admission | 261 (75) |
| 17 | Primary respiratory support  O2  CPAP  Mechanical ventilation | 99 (28)  184 (53)  64 (19) |
| 18 | Surfactant  >1 dose | 94 (27)  19 (5) |
| 19 | PPHN moderate-severe grade | 80 (23) |
| 20 | Duration of respiratory supportb, Median (IQR) (in days)  O2  CPAP  Mechanical ventilation | 5 (3-7)  3 (2-4)  3 (1-4) |
| 21 | Airleaks | 11 (3) |
| 22 | Culture positive sepsis  Early onset sepsis  Late onset sepsis | 7 (2)  2 (0.6) |
| 23 | Duration of hospital stayb, Median (IQR) (in days)  1-7 days  >7 days  >14 days | 10 (7-14)  103 (30)  244 (70)  74 (21%) |

**Abbreviations**: NST: Non stress test; CPAP: Continuous Positive Airway Pressure; PPHN: Persistent Pulmonary Artery Hypertension

**Note:** All values are expressed in n (%) except a- Mean (SD), b- Median (IQR)

c- NST data was available only in 240/347; d-APGAR data available only in 321/347.

**Table ll: Univariate analysis of morbidities between neonates with short stay (≤ 7 days) versus prolonged stay ( > 7 days)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S no** | **Characteristics** | **Short stay, n=103** | **Prolonged stay, n=244** | **RR/ MD 95% CI** | p |
| 1 | Gestation | 38 (1) | 38 (1) | 0.05  (-0.2 to 0.3) | 0.7c |
| 2 | Birth weight | 2986 (442) | 2991 (361) | -5.2 (-94 to 84) | 0.9c |
| 3 | Male | 58 (56) | 136 (55) | 1 (0.8-1.2) | 1a |
| 4 | Outborn | 64 (62) | 107 (43) | **1.4 (1.1-1.7)** | **0.002a** |
| 5 | Bag and mask ventilation at birth | 28 (27) | 93 (38) | **0.7 (0.5-1)** | **0.05a** |
| 6 | Intubation at birth | 2 (2) | 47 (19) | **0.1 (0.02-0.4)** | **<0.001b** |
| 7 | Maternal risk factors- Infection (fever/prom) | 14 (13) | 26 (10) | 1.2 (0.6-2.3) | 0.5a |
| 8 | HIE stage 2/3 | 2 (2) | 66 (27) | **0.07 (0.01-0.28)** | **<0.001b** |
| 9 | FiO2 at 1hr >30% | 47 (45) | 214 (87) | **0.5 (0.4-0.6)** | **<0.001a** |
| 10 | Downes score ≥4 at admission | 66 (64) | 220 (90) | **0.7 (0.6-0.8)** | **<0.001a** |
| 11 | Support beyond O2 as primary support | 44 (42) | 204 (83) | **0.5 (0.4-0.6)** | **<0.001a** |
| 12 | CPAP prim support | 37 (36) | 146 (60) | **0.6 (0.4- 0.8)** | **<0.001a** |
| 13 | CPAP initiation (in hours) | 2 (1-5) | 2 (1-48) | **-21**  **(-32 to -10)** | **<0.001d** |
| 14 | Surfactant | 1 (1) | 93 (38) | **0.02**  **(0.003-0.18)** | **<0.001b** |
| 15 | Moderate-severe PPHN | 3 (3) | 77 (31) | **0.09 (0.02-0.28)** | **<0.001b** |
| 16 | EONS-culture positive | 0 | 7 (2) |  | - |
| 17 | Airleaks | 3 (3) | 8 (3) | 0.8 (0.2-3) | 1b |

**Abbreviations:** HIE: Hypoxic Ischemic Encephalopathy; CPAP: Continuous Positive Airway Pressure; PPHN: Persistent Pulmonary Artery Hypertension; EONS: Early onset neonatal sepsis

**Foot note**- a: Chi-square test, b: Fischer’s Exact test; c:Student T test; d: Mann Whitney U test

**Table lll: Logistic regression analysis of the variables related to prolonged hospital stay.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S No. | Variable | OR (95% CI) | p | Estimated regression coefficient (SE) | Score\* |
| 1 | Primary support beyond O2 | 2.5 (1.3-4.8) | 0.05 | 0.9 (0.3) | 9 |
| 2 | FiO2>30% 1hour after admission | 4.4 (2.2 -8.7) | <0.001 | 1.48 (0.3) | 15 |
| 3 | Moderate-severe PPHN | 7.8 (2.1-28.5) | 0.002 | 2.0 (0.6) | 20 |
| 4 | HIE stage 2 or 3 | 18 (2.2-145) | 0.006 | 2.89 (1) | 29 |

Note: Score obtained by multiplying the regression coefficient by 10 and rounded off to nearest integer

**Abbreviations:** OR- Odds ratio, CI- Confidence interval, O2- Oxygen, FiO2- Fractional Inspired Oxygen, PPHN- Persistent Pulmonary Hypertension, HIE- Hypoxic Ischemic Encephalopathy.