**Table (1): Demographic and clinical data of studied mechanically ventilated cases.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Total | Survived | Died | p value |
| Sex |  |  |  | 0.468 |
| Male | 81(64.3%) | 17 (58.6%) | 64 (66.0%) |
| Female | 45(35.7%) | 12 (41.4%) | 33 (34.0%) |
| Term |  |  |  | 0.499 |
| Preterm | 91(72.2%) | 19 (65.5%) | 72 (74.2%) |
| Full term | 35(27.8%) | 10 (34.5%) | 25 (25.8%) |
| GA (weeks):Mean±SD  (Range) | 33.5±3.4  (26-39) | 35.8±1.7  (32-39) | 32.8±3.5  (26-39) | <0.001\* |
| <34 weeks | 60 (47.6%) | 3 (10.3%) | 57 (58.8%) | <0.001\* |
| ≥34 weeks | 66 (52.4%) | 26 (89.7%) | 40 (41.2%) |
| Mode of delivery |  |  |  | 0.041\* |
| SVD | 51(40.5%) | 7(24.1%) | 44 (45.4%) |
| Cesarean section | 75(59.5%) | 22 (75.9%) | 53 (54.6%) |
| Birth weight (g): Mean±SD  (Range) | 1890.6±825.6  (600-4100) | 2385.9±642.1  (1200-3700) | 1742.6±819.2  (600-4100) | <0.001\* |
| NBW (≥2.5 kg) | 28 (22.2%) | 11 (37.9%) | 17 (17.5%) | <0.001\* |
| LBW (1.5-2.4 kg) | 51 (40.5%) | 17 (58.6%) | 34 (35.1%) |
| VLBW (1.1-1.4 kg) | 31 (24.6%) | 1 (3.4%) | 30 (30.9%) |
| ELBW (≤1 kg) | 16 (12.7%) | 0 | 16 (16.5%) |
| Length of hospitalization (days) | 11.3±8.3  (1-47) | 17.7±6.7  (8-33) | 9.4±7.7  (1-47) | <0.001\* |
| Duration of ventilation assistance (h) | 72.1±64.2  (1-312) | 97.5±30.7  (30-150) | 64.5±69.5  (1-312) | 0.024\* |
| Duration of ventilation assistance (days) |  |  |  |  |
| Mean±SD  (Range) | 3.01±2.67  (0.04-13) | 4.06±1.28  (1.25-6.25) | 2.69±2.90  (0.04-13) | 0.015\* |
| ≤7 days | 118 (93.7%) | 29 (100%) | 89 (91.8%) | 0.196 |
| >7 days | 8 (6.3%) | 0 | 8 (8.2%) |

**Table (2): Comparison of causes of respiratory distress and indications for ventilation between cases survived and cases who died.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Survived  (N=29) | Died  (N=97) | p value |
| Type of respiratory distress |  |  | 0.247 |
| Pulmonary | 19 (65.5%) | 74 (76.3%) |
| Non-pulmonary | 10 (34.5%) | 23 (23.7%) |
| Causes of respiratory distress |  |  |  |
| RDS | 14 (48.3%) | 45 (46.4%) | 0.858 |
| MAS | 2 (6.9%) | 4 (4.1%) | 0.621 |
| Apnea of prematurity | 1 (3.4%) | 14 (14.4%) | 0.188 |
| Pneumonia | 2 (6.9%) | 8 (8.2%) | 1.000 |
| Pulmonary hemorrhage | 0 | 1 (1.0%) | 1.000 |
| Birth asphyxia | 0 | 1 (1.0%) | 1.000 |
| Sepsis | 3 (10.3%) | 13 (13.4%) | 1.000 |
| Congenital heart disease | 7 (24.1%) | 8 (8.2%) | 0.043\* |
| Central causes | 0 | 3 (3.1%) | 1.000 |

**Table (3): Factors associated with complication in MV in the study (N = 126).**

|  |  |  |  |
| --- | --- | --- | --- |
|  | With complications  (n =77) | Without complications (n=49) | p value |
| Sex |  |  | 0.567 |
| Male | 51 (66.2%) | 30 (61.2%) |
| Female | 26 (33.8%) | 19(38.8%) |
| Birth weight (g) | 1944.8±837.3 | 1805.5±808.1 | 0.385 |
| Gestational age (weeks) | 33.9±3.5 | 32.9±3.4 | 0.133 |
| Days on MV | 3.41±3 | 2.37±1.94 | 0.033\* |
| TLC (x103) | 13.22±6.12 | 12.82±4.94 | 0.703 |
| Platelets (x103) count | 124.96±90.57 | 192.78±95.83 | <0.001\* |
| Thrombocytopenia\* | 49 (63.6%) | 17 (34.7%) | 0.002\* |
| CRP | 39.9±45.5 | 14.1±18.8 | <0.001\* |

**Table (4): Univariate and multiple logistic regressions of predictors of mortality in mechanically ventilated neonates.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | | Mortality\* | | | |
| Crude OR (95% CI) | P-value | Adjusted OR (95% CI) | P-value |
|  |  | |  |  |  |  |
| Shock | | | 20.14 (2.72-149.22) | 0.003\* | 85.19 (9-806.22) | <0.001\* |
| Pulmonary hemorrhage | | | 22.37 (3.02-165.56) | 0.002\* | 19.3 (2.25-165.66) | 0.007\* |
| Gestational age | | >34w | 1.00 (reference) | <0.001\* | 1.00 (reference) | <0.001\* |
| <34w | 12.35 (3.5-43.61) | 9.36 (2.77-31.69) |
| pH (at start) | | >7.1 | 1.00 (reference) | <0.001\* | 1.00 (reference) | 0.006\* |
| ≤7.1 | 7.45 (2.62-21.22) | 4.99 (1.6-15.53) |
| FiO2 (at start) | | | 1.1 (1.04-1.17) | 0.002\* | 1.14 (1.07-1.22) | <0.001\* |
| PEEP (at start) | | | 0.36 (0.20-0.65) | 0.001\* | 0.21 (0.09-0.48) | <0.001\* |
| Platelet (x103) (at start) | | | 0.99 (0.99-1) | 0.003\* | 1 (0.99-1) | 0.464 |
| Birth weight | | ≥2.5 kg | 1.00 (reference) | 0.024\* | 0.91 (0.26-3.26) | 0.889 |
| <2.5 kg | 2.88 (1.15-7.18) |
| N.B. Dependent variable Mortality, OR odds ratio, CI confidence interval  R2= 0.740 | | | | | | |