|  |  |  |
| --- | --- | --- |
| **Age(hours)** | | 6.59±0.34 |
| **Weight(g)** | | 3106.58±65.193 |
| **Head circumference (cm)** | | 34.96±0.136 |
| **Apgar Score on**  **Admission** | **5** | 5(5.3%) |
| **6** | 9(9.5%) |
| **7** | 13(13.7%) |
| **8** | 44(46.3%) |
| **9** | 24(25.3%) |
| **Route of Delivery** | **Cesarean Section** | 58(61.1%) |
| **Vaginal Delivery** | 37(38.9%) |
| **Gestational age** | **32** | 6(6.3%) |
| **33** | 6(6.3%) |
| **34** | 5(5.3%) |
| **35** | 18(18.9%) |
| **36** | 18(18.9%) |
| **37** | 30(3.6%) |
| **38** | 12(12.6%) |
| **Apnea** | | 6(6.3%) |
| **Tachypnea** | | 23(24.2%) |
| **Tachycardia** | | 18(18.9%) |
| **Hypotonia** | | 35(36.8%) |
| **Seizure** | | 5 (5.3%) |
| **Lethargy** | | 20(21.2%) |
| **Hypersensitivity** | | 29(30.5%) |
| **Nasal Flaring** | | 8(8.4%) |
| **Poor Skin Color** | | 12(12.6%) |
| **Premature rupture of the membrane** | | 6(6.3%) |
| **Cyanosis** | | 8(8.4%) |
| **Distress** | | 47(49.5%) |
| **Bradycardia** | | 2(2.1%) |
| **Capillary Filling** | | 25(26.3%) |
| **Jaundice** | | 25(26.3%) |
| **Maternal Fever** | | 25(26.3%) |
| **Preeclampsia** | | 9 (9.4%) |

**Table 1:**The primary characteristics of the participants

**Table 2:**Comparing the data of the patients with uncertain sepsis, clinical sepsis, blood culture positive sepsis and controls.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Pvalue | Blood Culture  Positive Sepsis  (n=30) | Clinical Sepsis  (n=19) | Uncertain  sepsis  (n=30) | Without  Sepsis  (n=16) |  | |
| NS | 6.22±0.58 | 6.32±0.78 | 6.2±0.37 | 7.25±0.93 | **Age (hours)** | |
| <0.001 | 17.343±1.51 | 15.25±0.731 | 16.40±1.00 | 8.40±1.00 | **White blood cell**  **Count**  **(× 109/l**) | **On**  **admission** |
| NS | 28.8±1.74 | 28.8±1.89 | 29.1±1.58 | 29.1±1.58 | **Lymphocyte %** |
| NS | 62.6±1.77 | 60.0±2.19 | 61.8±3.13 | 54.8±3.13 | **Neutrophil %** |
| <0.001 | 2.9±0.50 | 2.73±0.507 | 1.450±0.25 | 0.887±0.117 | **Hs-CRP (mg/L)** |
| <0.001 | 63.7±6.05 | 63.7±3.05 | 43.8±3.07 | 36.75±3.67 | **Interleukin-6**  **(pg/ml)** |
| <0.001 | 4.3±0.82\*\* | 1.84±0.72 | 1.4±0.35 | 0.57±0.14 | **PCT (ng/ml)** |
| <0.01 | 10.46±0.793 | 13.20±0/73 | 12.60±0.378 | 8.60±0.37 | **White blood cell**  **Count**  **(× 109/l)** | **between**  **12 and 24**  **hours**  **after**  **admission** |
| <0.05 | 39.3±2.61 | 38.16±2.60 | 38.0±2.94 | 31.0±2.94 | **Lymphocyte %** |
| NS | 52.57±1.72 | 55.41±2.25 | 55.75±2.25 | 53.75±2.25 | **Neutrophil %** |
| <0.001 | 6.21±1.05 | 4.61±1.35 | 3.22±1.02 | 2.22±0.27 | **Hs-CRP (mg/L)** |
| <0.001 | 120.6±8.31\*\* | 117.5±9.39 | 75.5±5.99\*\* | 45.9±3.65 | **Interleukin-6**  **(pg/ml)** |
| <0.001 | 4.2±2.5 | 3.14±1.69 | 1.7±0.23\* | 0.55±0.239 | **PCT (ng/ml)** |

Variables are expressed as Mean ± Standard error of mean (SEM). Variable are compared using student t test. \*: P<0.05, \*\*: P<0.01, when comparing neonates with uncertain sepsis vs. neonates with clinical sepsis and comparing neonates with uncertain sepsis vs. neonates with blood culture positive sepsis. The column “p value” is presented, when comparing neonates with blood culture positive sepsis with controls. Hs-CRP, high sensitive- C reactive protein, PCT: procalcitonin; NS: not significant.

**Table 3:**Sensitivity, specificity, positive (PPV) and negative predictive value (NPV) of 12-h values of procalcitonin, interleukin-6 and hs-CRP,determined by ROC analysis using the Youden’s index for optimal cut-off values in neonates with blood-culture-positive and clinical sepsis compared to neonates with negative infectious status.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diagnostic test** | **Cut-off** | **Sensitivity (%)** | **Specificity (%)** | **PPV (%)** | **NPV (%)** | **Youden** |
| **Procalcitonin(ng/ml)** | ≥1.7 | 76.6 | 78.2 | 93 | 72 | 0.684 |
| ≥4.7 | 72 | 80.4 | 76 | 70 | 0.437 |
| **Interleukin-6(pg/ml)** | ≥60 | 54 | 100 | 100 | 59 | 0.543 |
| ≥10 | 71 | 65 | 76 | 60 | 0.366 |
| ≥150 | 46 | 100 | 100 | 55 | 0.457 |
| **hs-C-reactive protein(mg/L)** | ≥2.5 | 69 | 96 | 96 | 67 | 0.642 |
| ≥8 | 49 | 100 | 100 | 58 | 0.486 |