**S2 APPENDIX**

**Table 1- Clinical and laboratory features and outcome of patients presenting with MIS-C according to WHO case definition with or without history of contact:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Characteristics**  | **With Contact History**  | **Without** **Contact History**  | **Total** | **P-value** |
| **N=21** | **N=9** | **N=30** |  |
| **Demographic Characteristics**  |   |   |   |   |
| **Age in Month, Median (IQR)α** | 24(12-90) | 8 (4-48) | 24 (9-60) |  1.000 |
| **Age in Month, sub-group n (%)** |   |   |   |  1.000 |
|  1-11 Month | 3 (14%) | 5 (56%) | 8 (27%) |   |
|  12-23 Month | 4 (19%) | 1 (11%) | 5 (17%) |   |
|  24-59 Month | 6 (29%) | 1 (11%) | 7 (23%) |   |
|  ≥ 60 Month | 8 (38%) | 2 (22%) | 10 (33%) |   |
| **Gender** |   |   |   |  1.000 |
|  Male | 15 (71%) | 8 (89%) | 23 (77%) |   |
|  Female | 6 (29%) | 1 (11%) | 7 (23%) |   |
| **Symptoms on Admission**  |  |  |  |  |
| Fever | 21 (100%) | 9 (100%) | 30 (100%) |   |
| Length of Fever in Days | 4 (3-5) | 5 (4-5) | 4 (3-5) |  1.000 |
| Vomiting | 10 (48%) | 3 (33%) | 13 (43%) |  1.000 |
| Heart Failure | 11 (52%) | 3 (33%) | 14 (47%) |  1.000 |
| Hypotension | 9 (43%) | 2 (22%) | 11 (37%) |  1.000 |
| Diarrhea | 3 (14%) | 5 (56%) | 8 (27%) |  0.285 |
| Rash | 11 (52%) | 5 (56%) | 16 (53%) |  1.000 |
| **Clinical and laboratory Features**  |  |  |  |  |
| **Clinical Diagnosis**  |   |   |   |  1.000 |
|  KDβ like illness | 8 (38%) | 4 (44%) | 12 (40%) |   |
|  Non KD like illness with depressed cardiac function  | 8 (38%) | 2 (22%) | 10 (33%) |   |
|  Non KD like illness with TSS π | 5 (24%) | 3 (33%) | 8 (27%) |   |
|  **COVID-19PCR Test Done** | 18(85.7) | 8(88.8%) | 26(86.6) |  1.000 |
|  Positive | 9 (50%) | 5 (63%) | 14 (54%) |  1.000 |
|  Negative  | 9(50%) | 3(38%) | 12(46%) |  |
|  **COVID-19antibody Test Done**  | 5(23%) | 2(22%) | 7(23%) |  1.000 |
| Positive  | 5(100%) | 2(100%) | 7(100%) | 0.345 |
|  Negative  | 0(0%) | 0(0%) | 0(%) |  |
|  Neutrophils, Median (IQR) | 79 (71-85) | 72 (57-75) | 75 (66-85) |  1.000 |
|  Lymphocytes, Median (IQR) | 14 (10-20) | 20 (17-27) | 18 (11-24) |  1.000 |
|  Platelets Count, Median (IQR)  | 230 (160-317) | 245 (98-331) | 230 (140-330) |  1.000 |
|  CRP∞, Median (IQR)  | 21.00 (3.05-87.44) | 41.75 (15.25-67.91) | 31.00 (3.05-84.85) |  1.000 |
|  Pro-BNP€, Median (IQR)  | 12536 (2214-25245) | 7509 (1230-11932) | 11862 (2063-25000) |  1.000 |
|  TROP, Median (IQR)  | 0.500 (0.132-0.900) | 0.200 (0.050-0.612) | 0.452 (0.083-0.900) |  1.000 |
|  D-Dimer on Admission, Median (IQR) | 3.30 (0.50-30.00) | 14.00 (10.00-18.00) | 6.80 (1.00-24.90) |  1.000 |
|  Ferritin, Median (IQR)  | 383 (250-791) | 1000 (554-1527) | 587 (285-1035) |  1.000 |
|  LDHµ, Median (IQR) | 596 (372-1697) | 776 (406-849) | 617 (406-1460) |  1.000 |
| **Coronary Involvement n (%)** | 5 (24%) | 5 (56%) | 10 (33%) |  1.000 |
| **Type of Coronary Involvement, n (%)**  |   |   |   |  1.000 |
|  Dilation | 2 (40%) | 0 (0%) | 2 (20%) |   |
|  Aneurysm | 1 (20%) | 1 (20%) | 2 (20%) |   |
|  Echo bright | 2 (40%) | 4 (80%) | 6 (60%) |   |
| **Treatment**  |   |   |   |   |
| ICU ∞Admission | 18 (86%) | 8 (89%) | 26 (87%) |  1.000 |
| Steroids | 17 (81%) | 7 (78%) | 24 (80%) |  1.000 |
| IVIG£ | 9 (45%) | 3 (33%) | 12 (41%) |  1.000 |
| Anticoagulation | 14 (67%) | 9 (100%) | 23 (77%) |  0.720 |
| **Outcome** |   |   |   |  1.000 |
|  Survived | 16 (76%) | 8 (89%) | 24 (80%) |   |
|  Expired | 5 (24%) | 1 (11%) | 6 (20%) |   |

∞CRP: C-Reactive Protein, β KD: Kawasaki like disease, ∞ICU: Intensive care unit, αIQR: Interquartile rate, £ IVIG: Intravenous immunoglobulin,

€ Pro- BNP: brain natriuretic peptide, πTSS: Toxic Shock syndrome.

**Table 2: Normal range of different laboratory values:**

|  |  |
| --- | --- |
| **Laboratory Investigation** | **Normal Range** |
| Total Leukocyte Count | 4.8-11.3 x109/L |
| Neutrophils | 34.9-76.2 % |
| Lymphocytes | 17.5-45 % |
| Platelets | 154-433 x109/L |
| C-Reactive Protein (CRP) | 0-10 mg/L |
| Brain-Natriuretic Peptide (BNP) | <100 pg/mL |
| D-Dimer | < 250 ng/mL |
| Prothrombin Time (PT) | 11-13.5 s |
| Serum Ferritin | 20-250 ng/mL for adult males10-120 ng/mL for adult females, 18 to 39 years12-263 ng/mL for females, 40 years and older 25-200 ng/mL for newborns200-600 ng/mL for 1 month old50-200 ng/mL for 2-5 months old7-140 ng/mL for children 6 months to 15 years |
| Lactic acid dehydrogenase (LDH) | 140-280 IU/L |
| Left ventricle ejection Fraction (LVEF) | 50-70% |

**Table-3: Expired Patients (n=6) during the study period:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Case #** | **Age****(Months)** | **Presenting****Symptoms** | **Time****of Death since arrival** | **Spectrum of Disease****(MIS-C)** | **History of****Contact** | **PCR/Serology** **Result** | **Treatment** **Given** | **Laboratory Findings** | **Chest X Ray** | **Echocardiography****Findings** |
| **1** | 24 | Fever, Hypotension, poor perfusion, noUrine out put | 4 hours | MISC-Viral Myocarditis. | Positive | PCR Positive | Inotropes only. | TLC=1 (×109/L), Lymphocytes=10%Neutrophils=87%,Platelets 230, Troponin I, Pro BNP= Not done | Cardiomegaly andPulmonary edema | LVEF=20%, ModerateMR Mild Pleural andPericardial effusion |
| **2** | 12 | Fever for 3 days,Seizures, Generalized maculopapular Rash,Hypotension, Poor perfusion, decreased urinary output | 6-8 hours | MISC-Viral Myocarditis | Positive | PCR Not sent | Inotropes | TLC=9 (×109/L), Lymphocytes=18%Neutrophils=72%, Platelets=225(×109/L)Trop I=1.2ng/L, Pro BNP= 23750pg/ml, S. Ferritin=620ug/LALT=265 IU/L | Cardiomegaly Pulmonary edema | LVEF=30%Moderate MRMild Pleural andPericardial effusion |
| **3** | 60 | Fever for 5 days, with Diarrhea andVomiting.IrritabilityHypotension and decreased perfusion | 3 hours | MISC-Viral Myocarditis  | Positive | Not sent | Inotropes | TLC=10 (×109/L)Lymphocytes=15%Neutrophils=79%Platelets=415 (×109/L)ESR=77mm/hour, CRP=46mg/LTrop I=0.9ng/L, Pro BNP= 2385pg/ml,S. Ferritin=198 ug/L, ALT=113 IU/L | CardiomegalyPulmonary edema | LVEF=30%MILD MRMild Pericardial effusion |
| 4 | 8 | Fever for 2 days, preceded by vomiting, diarrhea, hypotension and decreased urinary output | 3 hours | MISC-Viral Myocarditis | Negative | Not sent | InotropesAspirinSteroids | TLC=8 (×109/L), Lymphocytes=11%, Neutrophils=80%Platelets=350(×109/L)CRP=49mg/LTrop I=1.2 ng/LPro BNP= 2385 pg/mlS. Ferritin=1000 ug/LALT=142 IU/L | CardiomegalyPulmonary Edema | Echo not done |
| 5 | 36 | Fever for 5 days,Rash, Fits,DecreasedUrinary output.Decreasedperfusion. | 24 hours | MIS-C Toxic Shock Syndrome(TSS) | Positive | PCR-Positive | FluidsSteroidsInotropesExtubated within 24 hours | TLC=11 (×109/L)Lymphocytes=10%Neutrophils=86%Platelets=212(×109/L)CRP=20mg/LTrop I=0.5 ng/LPro BNP= 255 pg/mlS. Ferritin=750 ug/L ALT=4186 IU/LBlood CSNegative | Normal cardiac shadow, noPulmonary edema | LVEF=55% MILD MRRepeat Echo showed LVEF-60 %.No PE |
| **6** | 10 | Fever for 3days,Vomiting diarrhea hypotension and decreased perfusion. | 3 | MISC-Viral Myocarditis. | Positive | Positive | InotropesSteroids | TLC=08(×109/L)Lymphocytes=11%Neutrophils=86%Platelets=139(×109/L)CRP=20mg/LTrop I=1.7 pg/mlPro BNP= 30206 ng/LS. Ferritin=383 ug/LLDH 1460 IU/L | CardiomegalyPulmonary | LVEF=30%No MRNo PE. |

µALT: Alanine transaminase, ∞CRP: C-Reactive Protein, β LVEF: Left Ventricle Ejection Fraction, πMR: Mitral Regurgitation, € Pro- BNP: brain natriuretic peptide,

α TLC: Total Leucocyte count.

**Table 4: Multinomial model to predict phenotype of disease from clinical and laboratory data:**

|  |  |  |
| --- | --- | --- |
| **Predictors**  | **KD MIS-C** | **VM-MIS-C** |
|   | **RR (CI 95%)** | **P-value**  | **RR (CI 95%)** | **P-value**  |
| Age in Month | 0.99(0.97 - 1.00) | 0.26 | 0.98(0.97 - 1.00) | 0.2 |
| Gender: Male² | 0.27(0.02 - 3.66) | 0.32 | 2(0.26 - 15.38) | 0.5 |
|  Leucocyte | 0.93(0.82 - 1.05) | 0.26 | 0.92(0.81 - 1.06) | 0.27 |
|  Neutrophils | 1(0.94 - 1.08) | 0.8 | 0.98(0.91 - 1.04) | 0.56 |
|  Lymphocytes | 0.96(0.87 - 1.05) | 0.38 |  1.01(0.94 - 1.08) | 0.68 |
|  Platelets Count | 1.01( 1.00 - 1.02) | 0.017 | 1(0.99 - 1.02) | 0.142 |
|  CRP ∞ |  1.00(0.99 - 1.02) | 0.27 | 0.98(0.94 - 1.01) | 0.23 |
|  Pro-BNP, € | 0.99(0.99 - 1.00) | 0.17 | 1(0.99 - 1.00) | 0.4 |
| Troponin  |  1.01(0.56 - 1.81) | 0.97 | 1.05(0.60 -1.83) | 0.85 |
| D-Dimer  | 1.01(0.92 - 1.10) | 0.76 | 1.03(0.90 - 1.17) | 0.64 |
| Prothrombin Time. | 0.97(0.91 - 1.04) | 0.52 | 1.03(0.97 - 1.09) | 0.3 |
| Ferritin | 1(0.99 - 1.00) | 0.43 | 0.99(0.99 - 1.00) | 0.36 |
| Lactic acid dehydrogenase | 0.99(0.99 - 1.00) | 0.64 | 0.99(0.99 - 1.00) | 0.77 |
| ALTµ | 0.99(0.99 - 1.00) | 0.26 | 0.99(0.99 - 1.00) | 0.35 |
| Admission ICU ∞/ | 1.4(0.10-18.6) | 0.799 | 0.77(0.04 - 14.74) | 0.86 |
| IVIG £ | 0.06(0.007 - 0.60) | 0.16 | ---- | --- |
| IVIG and Steroids  | 0.46(0.06 - 3.344) | 0.44 | ---- | --- |
| Anti-coagulation | 8.97-08 | 0.99 | 1.11(0.16 - 7.50) |   |
| MRπ | 4.5(.57 35.51) | 0.15 | 0.12(0.01- 1.52) | 0.1 |
| Pericardial Effusion | 1.31E+07 | 0.99 | 0.17(0.02 - 1.43) | 0.1 |
|  LVEF β Admission | 1.04(0.98 - 1.10) | 0.17 | 1(0.94 - 1.06) | 0.9 |
| Coronary Involvement | 0.42(0.06- 2.68) | 0.36 | --- | - |
| Echo-bright Coronary | 1.49(0.22 -10.21) | 0.67 | --- | - |
| Follow up | --- |   | 8.00(0.59 -106.97) | 0.11 |
| Outcome | --- |   | 6.99(0.61 - 79.80) | 0.11 |
| Base category is MIS-C TSS  |  |  |  |
| ²compare with female  |  |  |  |  |

µALT: Alanine transaminase, ∞CRP: C-Reactive Protein, ∞/ ICU: Intensive care unit, £ IVIG: Intravenous immunoglobulin, β LVEF: Left Ventricle Ejection Fraction,

 πMR: Mitral Regurgitation, € Pro- BNP: brain natriuretic peptide.