**Legend Figure, Supplemental Digital Content 1:**

Flow diagram of study patients

**Figure, Supplemental Digital Content 1: Consort Flow Chart of Study**

Patients excluded
(n = 14)

1. FiO2 requirement >60% = 4
2. Active air leak = 5
3. Died before enrolment = 3
4. High frequency ventilation = 2

Consecutive patients screened for eligibility
(n = 54)

Number of patients enrolled with informed consent (n = 40)

Number of patients followed up and analyzed
(n = 40)

**Table, Supplemental Digital Content 2:**

**Prerequisites and Procedure of Indirect Calorimetry**

|  |
| --- |
| *Prerequisites to measurement* |
| 1. Feeds to be given at a same quantity and frequency for at least 12 hours
 |
| 1. Last feed should have been given at least 4 hours before the measurement
 |
| 1. Ventilator settings must remain constant for 90 minutes’ prior
 |
| 1. Inspired FiO2 should remain constant during the measurement
 |
| 1. Patient’s body temperature should be 35.5oC - 38.5oC in the previous 3 hours.
 |
| 1. If the child is on hemodialysis, indirect calorimetry was done at least 4 hours after the end of dialysis session
 |
| 1. Patient should not be agitated or in pain during the measurements. Analgesics or sedatives if necessary were given at least 30 minutes before the study
 |
| *Procedure of IC* |
| 1. Calorimeter was warmed up for 1 hour and then calibrated before each test using a known gas mixture containing 16% oxygen, 5% carbon dioxide, and rest balanced with nitrogen.
 |
| 1. Steady state (defined as a period of at least 5 minutes with <10% fluctuation in oxygen consumption (VO2) and carbon dioxide production (VCO2) and < 5% fluctuation in respiratory quotient) was achieved before the start of measurement.
 |
| 1. If the steady state was not achieved, the study period was prolonged and/or additional measurements were taken at a separate time.
 |
| 1. Flow sensor and gas calibrations were performed before each measurement.
 |
| 1. In mechanically ventilated children, flow sensor was connected to the expiratory outlet of ventilator with an adaptor and a sampling port was connected to a T-piece connector attached to an inspiratory limb of the ventilator circuit.
 |

**Legend Figure, Supplemental Digital Content 3:**

**Bland Altman plots depicting agreement of predictive equations with mREE. 1a. Schofield;** P=0.002**, 2b. FAO/WHO/UNU;** P=0.006**, 3c. Harris Benedict equations;** P=0.012

**Figure, Supplemental Digital Content 3:**

**Bland Altman plots depicting agreement of predictive equations with mREE**



**Table, Supplemental Digital Content 4:**

**Correlation of baseline nutrition status and clinical variables**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Underweight****N = 7 (17.5%)** | **Not Underweight****N = 33 (82.5%)** | **P value** |
| Age\* (yr) | 5.6 ± 1.1 | 8 ± 2.6 | 0.017 |
| BMI\* (Kg/m2) | 11.8 ± 0.75 | 16.4 ± 2.2 | <0.0001 |
| PRISM III\* | 18.3 ± 5.7 | 19.7 ± 7.9 | 0.78 |
| mREE\* (Kcal) | 1007 ± 130 | 1148 ± 333 | 0.47 |
| mREE/kg\* (Kcal/kg) | 68 ± 24 | 48 ± 12 | 0.025 |
| Cumulative calorie balance\* (Kcal) | -1834 ± 1665 | -1745 ± 2349 | 0.32 |
| Cumulative nitrogen balance\* (g) | -8.5 ± 8 | -6.2 ± 12.6 | 0.28 |
| Ventilation free days\* | 11 ± 11 | 16.8 ± 7.9 | 0.31 |
| Health care associated infection | 1 | 3 | 0.46 |

\*Mean ± SD