**Supplementary data**

**Supplementary Table 1**

Hemoglobin levels and mean corpuscular volume before and after iron treatment among IDA infants with and without thalassemia minor.

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameters** | **IDA infants without thalassemia minor****(N=18)** | **IDA infants with thalassemia minor****(N=16)** | ***P*** |
| Pre-treatment Hb, g/dL- mean (SD)- range | 10.2 (0.8)8.1-10.9 | 10.2 (0.8)7.7-10.9 | 0.893 |
| Post-treatment Hb, g/dL- mean (SD)- range | 11.8 (0.7)10.6-13.1 | 11.1 (0.8)9.7-12.6 | 0.013\* |
| Increment of Hb, g/dL- mean (SD)- range | 1.7 (1.1)0.1-4.1 | 1.1 (0.9) 0.2-3.1 | 0.099 |
| Pre-treatment MCV, fL- mean (SD)- range | 68.8 (6.7)56.5-83.8 | 61.8 (6.6) 48.6-69.4 | 0.006\* |
| Post-treatment MCV, fL- mean (SD)- range | 70.7 (4.9)67.5-84.1 | 65.1 (4.4) 56.0-70.1 | 0.867 |
| Increment of MCV, fL- mean (SD)- range | 4.9 (3.7)0.3-11.8  | 3.5 (3.4) 0-9.5 | 0.278 |

Note: Hb, hemoglobin; IDA, iron deficiency anemia; MCV, mean corpuscular volume.

Data is expressed as mean (SD) and range, according to the nature of variables. Statistical method used: Mann-Whitney U or Student’s t test, as appropriate. \**P* < 0.05 was considered statistically significant.

**Supplementary Table 2**

Comparison of laboratory parameters for infants with normal iron status *vs*. IDA either with or without thalassemia minor.

|  |  |  |
| --- | --- | --- |
| **Parameters** | **Infants with normal iron status:** **with and without thalassemia minor** | **infants with IDA:** **with and without thalassemia minor** |
| Hb, g/dL | <0.001\* | 0.237 |
| Hct, % | 0.017\* | 0.341 |
| RBC, x106/cu.mm. | <0.001\* | 0.013\* |
| MCV, fL | <0.001\* | 0.048\* |
| MCH, pg | <0.001\* | 0.132 |
| MCHC, % | 0.250 | 0.657 |
| RDW, % | 0.001\* | 0.350 |

Note: Hb, hemoglobin; Hct, hematocrit; IDA, iron deficiency anemia; MCV, mean corpuscular volume; MCH, mean corpuscular hemoglobin; MCHC, mean corpuscular hemoglobin concentration; RBC, red blood cell count; RDW, red blood cell distribution width.

Data is expressed as *P* value, according to the nature of variables. Statistical method used: Mann-Whitney U or Student’s t test, as appropriate. \**P* < 0.05 was considered statistically significant.

**Supplementary Table 3A**

Iron parameters and hepcidin levels among different populations of 110 infants with iron replete.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Populations** | **N** | **SF, ng/mL** | **TS, %** | **Hepcidin, ng/mL** | **Hepcidin/SF ratio** |
| Infants without thalassemia | 55 | 71.4 (33.4) | 22.2 (16.4) | 4.9 (3.8) | 0.08 (0.06) |
| Infants with α+-thalassemia trait | 14 | 77.7 (52.3) | 18.6 (7.5) | 4.7 (1.8) | 0.09 (0.05) |
| Infants with Hb CS trait | 6 | 46.3 (11.2) | 21.1 (5.5) | 3.3 (0.9) | 0.08 (0.04) |
| Infants with α0-thalassemia trait | 4 | 92.2 (56.2) | 19.1 (8.0) | 4.5 (1.6) | 0.07 (0.05) |
| Infants with Hb E trait | 23 | 67.0 (42.1)  | 21.1 (6.1) | 5.6 (4.8) | 0.09 (0.08) |
| Infants with homozygous Hb E  | 2 | 45.7 (14.5) | 22.3 (9.6) | 9.3 (9.1) | 0.25 (0.28) |
| Infant with β-thalassemia trait | 1 | 37.7 (0) | 25.7 (0) | 3.8 (0) | 0.10 (0 |
| Infants with α+-thalassemia trait with Hb E trait | 3 | 113.5 (20.3) | 28.9 (8.8) | 3.3 (0.9) | 0.03 (0.01) |
| Infant with α0-thalassemia trait with Hb E trait | 1 | 34.6 (0) | 13.4 (0) | 2.9 (0) | 0.08 (0) |
| Infant with α+-thalassemia trait with β thalassemia trait | 1 | 58.7 (0) | 13.9 (0) | 7.1 (0) | 0.12 (0) |
| Infant with homozygous Hb E with Hb CS trait | 0 | - | - | - | - |

Note: SF, serum ferritin; TS, transferrin saturation. Data is shown as mean (SD)**.**

**Supplementary Table 3B**

Iron parameters and hepcidin levels among different populations of 96 infants with iron deficiency and/or iron deficiency anemia.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Populations** | **N** | **SF, ng/mL** | **TS, %** | **Hepcidin, ng/mL** | **Hepcidin/SF ratio** |
| Infants without thalassemia | 54 | 26.7 (25.1) | 14.2 (7.1) | 5.5 (4.6) | 0.45 (0.71) |
| Infants with α+-thalassemia trait | 10 | 28.9 (21.6) | 12.9 (6.8) | 4.3 (1.3) | 0.25 (0.22) |
| Infants with α0-thalassemia trait | 4 | 26.9 (9.2) | 17.1 (6.0) | 8.2 (7.3) | 0.36 (0.39) |
| Infant with Hb E trait | 1 | 13.0 (0) | 9.4 (0) | 3.2 (0) | 0.24 (0) |
| Infants with homozygous Hb E  | 17 | 30.3 (12.6) | 17.1 (8.5) | 4.5 (3.0) | 0.19 (0.17) |
| Infants with β-thalassemia trait | 2 | 27.8 (1.6) | 18.0 (10.4) | 3.0 (1.0) | 0.11 (0.03) |
| Infants with α+-thalassemia trait with Hb E trait | 0 | - | - | - | - |
| Infants with α0-thalassemia trait with Hb E trait | 7 | 19.6 (9.0) | 13.9 (7.3) | 5.2 (4.3) | 0.29 (0.18) |
| Infant with α+-thalassemia trait with β thalassemia trait | 0 | - | - | - | - |
| Infant with homozygous Hb E with Hb CS trait | 0 | - | - | - | - |

Note: SF, serum ferritin; TS, transferrin saturation. Data is shown as mean (SD).