**Table S1:** Demographic characteristics of the study participants

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|  |  |  |  |  |  | **Crude** |  |  | **Adjusted** |  |  |
|  | **Variable** | **Characteristic** | **No brain swelling** | **Brain swelling** | **p-value\*** | **OR** | **95% CI** | **p-value\*\*** | **OR** | **95% CI** | **p-value\*\*\*** |
|  | Sex | Female (%) | 12 (13.6) | 76 (86.4) | 0.371 |  |  |  |  |  |  |
|  |  | Male (%) | 10 (9.4) | 97 (90.6) |  | 1.53 | 0.63; 3.73 | 0.349 | ND |  |  |
|  | Age (months) | Median (IQR) | 36.5 (22.0; 58.0) | 46.0 (31.0; 67.0) | 0.114 | 1.02 | 1.0; 1.04 | 0.107 | 1.01 | 0.99; 1.03 | 0.548 |
|  | Hours in coma prior to admission | Median (IQR) | 2.19 (1.95; 2.40) | 2.08 (1.79; 2.99) | 0.78 | 1.06 | 0.64; 1.76 | 0.811 | ND |  |  |
|  | Parasitaemia (parasites log10/uL) | Median (IQR) | 11.34 (10.07; 12.55) | 10.64 (7.46; 12.15) | 0.32 | 0.93 | 0.78; 1.12 | 0.454 | ND |  |  |
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|  | \* Univariate association  \*\*Simple Logistic regression | |  |  |  |  |  |  |  |  |  |
|  | \*\*\*Multivariable logistic regression | |  |  |  |  |  |  |  |  |  |
|  | ND Not done |  |  |  |  |  |  |  |  |  |  |
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Univariate and multivariable logistic regression model showing the association between brain swelling and demographic characteristics of the study participants. In this analysis brain swelling score of 3 was considered to not have swelling and scores of 4-8 were considered to have brain swelling. Variables with p-value ≤ 0.2 in univariate analysis were included in the multivariate model. Group comparisons were done using *Mann-Whitney U* test except for age where Fisher’s Exact test was used. Results for parasitaemia were log transformed (log10).

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| **Table S2:** Univariate and multivariate associations with brain swelling | | | | | |  |  |  |  |  |  |  |
|  |  | |  | |  |  | **Crude** |  |  | **Adjusted** |  |  |
| **Variable** | **Characteristic** | | **No brain swelling n (%)** | | **Brain swelling n (%)** | **p-value\*** | **OR** | **95% CI** | **p-value\*\*** | **OR** | **95% CI** | **p-value\*\*\*** |
| IL-10 (pg/mL) | Median (IQR) | | 5.4 (2.86; 6.39) | | 5.36 (4.44; 6.34) | 0.67 | 1.11 | 0.83; 1.48 | 0.468 | ND |  |  |
| IL-1β (pg/mL) | Median (IQR) | | 2.33 (1.88; 2.90) | | 2.02 (1.36; 2.70) | 0.62 | 0.9 | 0.55; 1.46 | 0.669 | ND |  |  |
| IL-6 (pg/mL) | Median (IQR) | | 5.54 (4.28; 6.39) | | 5.18 (4.28; 6.22) | 0.73 | 0.97 | 0.72; 1.31 | 0.844 | ND |  |  |
| IL-12 (pg/mL) | Median (IQR) | | 2.94 (1.42; 3.20) | | 3.11 (2.43; 3.29) | 0.56 | 1.09 | 0.64; 1.88 | 0.748 | ND |  |  |
| IL-8 (pg/mL) | Median (IQR) | | 5.02 (3.83; 5.64) | | 4.32 (3.58; 5.22) | 0.16 | 0.82 | 0.57; 1.18 | 0.289 | ND |  |  |
| TNF (pg/mL) | Median (IQR) | | 2.81 (2.32; 3.51) | | 3.03 (2.41; 3.65) | 0.59 | 1.12 | 0.74; 1.70 | 0.58 | ND |  |  |
| Ratio (IL10/TNF) | Median (IQR) | | 2.27 (0.32; 4.32) | | 2.21 (1.0; 3.58) | 0.77 | 1.02 | 0.79; 1.32 | 0.86 | ND |  |  |
| Ratio (IL-10/IL-6) | Median (IQR) | | 0.29 (-0.83; 0.81) | | 0.21 (-0.64; 0.80) | 0.28 | 1.3 | 0.87; 1.93 | 0.195 | 1.23 | 0.72; 2.08 | 0.464 |
| Ratio (IL-10/IL-1β) | Median (IQR) | | 3.49 (2.55; 6.10) | | 3.52 (2.31; 4.46) | 0.55 | 0.79 | 0.50; 1.24 | 0.303 | ND |  |  |
| Ratio (IL-10/IL-12) | Median (IQR) | | 1.57 (-0.12; 3.52) | | 2.67 (0.76; 3.93) | 0.26 | 1.23 | 0.82; 1.82 | 0.313 | ND |  |  |
| Ratio (IL-10/IL-8) | Median (IQR) | | 0.27 (-0.60; 1.51) | | 1.06 (-0.06; 1.74) | 0.14 | 1.24 | 0.91; 1.70 | 0.174 | 1.14 | 0.77; 1.70 | 0.516 |
| \* Univariate association  \*\*Simple Logistic regression | | | |
| \*\*\*Multivariable logistic regression | | | |
| ND Not done | |

Univariate association and multivariable logistic regression model showing the association between brain swelling and a number of factors. In this analysis brain swelling scores of 3 were considered to not have swelling (normal) and scores of ≥4-8 were considered to have swelling. Variables with p-value ≤ 0.2 in univariate analysis were included in the multivariate model. Group comparisons were done using *Mann-Whitney U* test except for age where Fisher’s Exact test was used. Results for cytokine concentrations and parasitemia were log transformed (log10). multivariable logistic regression model. Multivariable logistic regression model analysis was based on only those variables with p-value ≤ 0.2 in univariate analysis.