Supplementary Table 1. Median amino acid concentrations of the study population at baseline and the proportion of patients outside reference range\*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Reference plasma range (lab)** | **Median plasma AA concentration (IQR)** | **No of patients below reference range** | **No of patients above reference range** |
|  | µmol/L | µmol/L |  |  |
| ***Essential AA*** |
| **Threonine** | 74-175 | 96.0 (66.0-221) | 4/10 | 3/10 |
| **Tryptophan** | 24-112 | 24.7 (16.9-35.7) | 4/10 | 0 |
| **Methionine** | 13-33 | 33.3 (20.0-263) | 0 | 4/10 |
| **Phenylalanine** | 40-81 | 91.0 (78.5-115) | 0 | 7/10 |
| **Lysine** | 107-244 | 139.8 (129.9-245) | 2/10  | 2/10 |
| ***Non-essential AA*** |
| **Glutamic acid** | 12-98 | 33.0 (14.3-54.3) | 1/10 | 0 |
| **Asparagine** | 36-71 | 46.6 (41.8-82.8) | 1/10 | 3/10 |
| **Serine** | 67-161 | 51.2 (36.5-113) | 7/10 | 1/10 |
| **Glutamine** | 482-938 | 423.7 (389.7-886) | 6/10 | 2/10 |
| **Histidine** | 62-150 | 78.7 (76.0-157) | 0 | 2/10 |
| **Glycine** | 121-409 | 155.0 (116.0-299) | 3/10 | 1/10 |
| **Arginine** | 50-126 | 56.8 (49.7-141) | 3/10 | 2/10 |
| **Taurine** | 38-197 | 32.6 (21.3-59.4) | 5/10 | 1/10 |
| **Alanine** | 203-518 | 204.8 (170.2-402) | 5/10 | 1/10 |
| **Tyrosine** | 43-90 | 54.2 (48.8-87.0) | 2/10 | 2/10 |
| **Ornithine** | 24-112 | 57.3 (36.8-117) | 2/10 | 2/10 |
| **Citrulline** | 14-57 | 22.6 (18.5-37.9) | 1/10 | 0 |
| **α- aminobutyric acid** | 9-45 | 27.0 (9.2-45.4) | 2/10 | 2/10 |
| **Essential branch-chained AA** |
| **Valine** | 168-350 | 224.9 (129.5-273) | 4/10 | 1/10 |
| **Isoleucine** | 42-98 | 89.0 (48.3-107) | 2/10 | 3/10 |
| **Leucine** | 73-172 | 118.5 (62.9-167) | 4/10 | 2/10 |

\*reference values were obtained from 44 healthy volunteers

 Supplementary table 2. Clearance of individual AA

|  |  |
| --- | --- |
| **Amino Acid**  | **Mean clearance ± SD, mL/min** |
| **Glutamate**  | 16.6 ± 4.9 |
| **Asparagine** | 34.8 ± 3.3 |
| **Serine** | 33.0 ± 3.5 |
| **Glutamine** | 34.2 ± 3.1 |
| **Histidine** | 33.4 ± 3.0 |
| **Glycine** | 33.5 ± 3.2 |
| **Threonine** | 34.0 ± 3.2 |
| **Citruline** | 30.8 ± 3.8 |
| **Arginine** | 34.1 ± 3.8 |
| **Alanine**  | 36.4 ± 4.4 |
| **Taurine** | 26.4 ± 5.3 |
| **α- aminobutyric acid** | 32.9 ± 3.0 |
| **Tyrosine** | 34.7 ± 3.5  |
| **Valine** | 32.7 ± 2.6 |
| **Methionine** | 34.9 ± 3.8 |
| **Isoleucine** | 33.0 ± 3.5  |
| **Phenylalanine** | 35.1 ± 3.0 |
| **Tryptophane** | 26.5 ± 6.3 |
| **Leucine** | 33.0 ± 3.5 |
| **Ornithine** | 27.7 ± 2.6 |
| **Lysine** | 30.6 ± 2.9 |

Clearance was calculated as: $\frac{\left[AA\_{uf}\right]\*Q\_{uf}}{\left[AA\_{pl}\right] }$, where [AApl]: AA concentration in the plasma, (µmol/L), Quf: ultrafiltration flow rate (mL/min), [AAuf]: AA concentration in the ultrafiltrate (μmol/L).

The mean individual AA clearance of the three measurements in all patients is presented.