**Supplementary data analysis for DKA study**

Two sample t-test was used for each of the variables that is of interest. Both HCO3 closure time and AG closure time were analyzed on the logarithm scale to meet the normal assumption. The time it took for glucose to normalize is transformed as .

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | One-bag system | | | | | Two-bag system | | | | | t value | p value |
| N | Mean | SD | Mean (back transformed)  in hours | SD (back transformed | N | Mean | SD | Mean (back transformed)  in hours | SD (back transformed) |
| HCO3 closure time | 248 | 2.9933 | 0.6877 | 19.95141 | 1.989135 | 134 | 2.9179 | 0.8239 | 18.50239 | 2.279372 | 0.90 | 0.3676 |
| AG closure time | 248 | 2.6077 | 0.5622 | 13.56781 | 1.754528 | 134 | 2.3931 | 0.4861 | 10.94738 | 1.625963 | 3.73 | 0.0002 |
| Time for glucose to normalize | 248 | 1.7391 | 0.3205 | 9.147412 | 1.377817 | 134 | 1.6725 | 0.2453 | 7.824643 | 1.278005 | 2.27 | 0.0241 |

There is no significant difference for HCO3 closure time between two groups. Two bag system has significant short AG closure time and time for glucose to normalize than one bag system.