**Tables:**

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| --- | --- | --- |
| Parameters | Type 2 diabetic patients with overweight | p |
| Total | Group 1 | Group 2 |
| Baseline | Metformin(12 W) | Metformin +SGLT2 inhibitors (24 W)  | Baseline | Metformin(12 W) | Metformin + Dapagliflozin (24 W) | Baseline | Metformin(12 W) | Metformin + Empagliflozin (24 W) |
| Weight (kg) | 78.18±8.25 | 78.05±8.17a | 76.24±8.33a | 78.64±9.79 | 78.55±9.69 | 76.72±9.88b | 77.66±6.39 | 77.48±6.33b | 75.70±6.46b |  |
| Change | -0.13 (-0.23, -0.03), -1.81 (-2.13, -1.48) | -0.09 (-0.25, 0.07), -1.83 (-2.22, -1.45) | -0.18 (-0.31, -0.04), -1.79 (-2.39, -1.18) | 0.742 |
| BMI (kg/m2) | 27.39±1.34 | 27.35±1.33a | 26.70±1.32a | 27.44±1.52 | 27.42±1.51 | 26.77±1.47b | 27.33±1.16 | 27.26±1.14b | 26.63±1.18b |  |
| Change | -0.05 (-0.08, -0.01), -0.64 (-0.77, -0.52) | -0.03 (-0.08, 0.03), -0.65 (-0.82, -0.49) | -0.06 (-0.02, -0.64), -0.64 (-0.86, -0.41) | 0.784 |
| WC (cm) | 96.28±3.73 | 96.12±3.71a | 93.30±3.89a | 96.15±3.61 | 96.04±3.57 | 93.22±3.70b | 96.43±3.98 | 96.21±4.00b | 93.39±4.24b |  |
| Change | -0.16 (-0.24, -0.09), -2.82 (-3.17, -2.48) | -0.11 (-0.22, 0.00), -2.83 (-3.38, -2.27) | -0.22 (-0.34, -0.11), -2.82 (-3.27, -2.38) | 0.882 |
| Systolic BP (mmHg) | 120.00±8.31 | 120.50±6.48 | 116.00±5.48a | 120.63±8.54 | 120.63±7.04 | 116.88±5.74b | 119.29±8.29 | 120.36±6.03 | 115.00±5.19b |  |
| Change | 0.54 (-1.25, 2.32), -4.55 (-5.79, -3.31) | 0.00 (-2.13, 2.13), -3.75 (-5.69, -1.81) | -1.07 (-2.20, 4.35), -5.35 (-7.10, -3.62) | 0.636 |
| Diastolic BP (mmHg) | 76.00±6.22 | 78.83±6.11a | 75.17±4.82a | 76.25±6.19 | 79.69±5.91b | 75.00±5.16b | 75.71±6.46 | 77.86±6.42 | 75.36±4.58 |  |
| Change | 2.79 (0.69, 4.90), -3.59 (-5.38, -1.81) | 3.44 (0.25, 6.62), -4.69 (-6.62, -2.76)  | 2.14 (-0.98, -5.27), -2.50 (-5.95, -0.95) | 0.730 |
| FPG (mmol/L) | 13.78±1.12 | 13.22±1.13a | 11.17±0.76a | 13.80±0.83 | 13.41±1.09 | 11.21±0.62b | 13.76±1.39 | 13.01±1.18b | 11.12±0.91b |  |
| Change | -0.57 (-0.91, -0.23), -2.04 (-2.39, -1.70) | -0.39 (-91, 0.12), -2.20 (-2.79, -1.61) | -0.75 (-1.26, -0.24), -1.89 (-2.29, -1.48) | 0.603 |
| PPBG (mmol/L) | 18.92±1.38 | 18.26±1.10a | 14.93±1.44a | 18.97±1.37 | 18.28±1.17b | 14.32±1.66b | 18.86±1.45 | 18.24±1.06b | 15.64±0.69b |  |
| Change | -0.65 (-1.09, -0.22), -3.29 (-4.03, -2.54) | -0.69 (-1.37, -0.00), -3.96 (-5.37, -2.56) | -0.62 (-1.22, -0.03), -2.61 (-3.10, -2.11) | 0.291 |
| HbA1C (%(mmol/mol)) | 9.31±0.44(78.23±4.92) | 9.20±0.45a(76.93±4.97) | 8.04±0.48a(64.33±5.31) | 9.34±0.39(78.63±4.40) | 9.21±0.37b(77.13±4.15) | 7.90±0.33b(62.75±3.64) | 9.27±0.51(77.79±5.59) | 9.18±0.54(76.71±5.93) | 8.21±0.58b(66.14±6.40) |  |
| Change | -0.11 (-0.19, -0.04), -1.14 (-1.29, -1.00)-1.29 (-2.14, -0.43), -12.47 (-14.12, -10.83) | -0.13 (-0.25, -0.02), -1.31 (-1.54, -1.08)-1.50 (-2.82, -0.18), -14.38 (-17.05, -11.71) | -0.09 (-0.19, 0.01), -0.97 (-1.17, -0.77)-1.07 (-2.31, 0.17), -10.57 (-12.74, -8.40) | 0.671 |
| TC (mmol/L) | 5.34±0.30 | 5.27±0.26a | 4.96±0.23a | 5.32±0.29 | 5.25±0.25b | 4.98±0.26b | 5.36±0.32 | 5.29±0.29b | 4.94±0.21b |  |
| Change | -0.07 (-0.12, -0.03), -0.32 (-0.38, -0.25) | -0.07 (-0.12, -0.02), -0.28 (-0.37, -0.19) | -0.08 (-0.16, -0.00), -0.35 (-0.45, -0.24) | 0.884 |
| TG (mmol/L) | 2.21±0.14 | 2.17±0.12a | 2.0±0.13a | 2.18±0.14 | 2.15±0.12 | 2.00±0.14b | 2.24±0.13 | 2.19±0.12b | 2.03±0.13b |  |
| Change | -0.04 (-0.07, -0.02), -0.15 (-0.18, -0.12) | -0.03 (-0.06, -0.00), -0.15 (-0.18, -0.12) | -0.06 (-0.10, -0.02), -0.16 (-0.21, -0.10) | 0.373 |
| HDL-C (mmol/L) | 1.18±0.10 | 1.21±0.09a | 1.33±0.10a | 1.18±0.07 | 1.19±0.07 | 1.33±0.07b | 1.19±0.12 | 1.22±0.11 | 1.33±0.12b |  |
| Change | 0.03 (0.00, 0.05), 0.12 (0.10, 0.14) | 0.02 (-0.01, 0.05), 0.14 (0.10, 0.17) | 0.04 (-0.01, 0.08), 0.11 (0.06, 0.15) | 0.719 |
| LDL-C (mmol/L) | 3.14±0.34 | 3.05±0.31a | 2.69±0.26a | 3.13±0.29 | 3.06±0.26b | 2.70±0.23b | 3.16±0.41 | 3.04±0.37b | 2.66±0.30b |  |
| Change | -0.10 (-0.15, -0.05), -0.36 (-0.42, -0.30) | -0.08 (-0.13, -0.02), -0.35 (-0.42, -0.28) | -0.12 (-0.22, -0.02), -0.37 (-0.47, -0.27) | 0.913 |
| Creatinine (μmol/L) | 97.00±16.26 | 96.93±15.44 | 75.53±16.17a | 95.13±16.80 | 93.31±14.68 | 72.44±14.49b | 99.14±15.97 | 101.07±15.76 | 79.07±17.77b |  |
| Change | 0.06 (-3.84, 3.96), -21.43 (-25.74, -17.14) | -1.81 (-7.22, 3.59), -20.88 (-26.10, -15.65) | 1.93 (-4.51, 8.37), -22.00 (-29.84, -14.16) | 0.263 |
| Albumin (g/L) | 45.33±2.96 | 45.50±2.78 | 45.60±2.86 | 44.75±3.11 | 45.06±2.77 | 45.13±2.85 | 46.00±2.75 | 46.00±2.80 | 46.14±2.88 |  |
| Change | 0.16 (-0.18, 0.50), 0.10 (-0.21, -0.41) | 0.31 (-0.28, 0.90), 0.06 (-0.32, -0.45) | -0.00 (-0.41, 0.41), 0.14 (-0.42, 0.70) | 0.311 |
| AST (IU/L) | 30.47±6.96 | 30.83±6.68 | 29.77±6.43 | 31.56±8.42 | 32.69±7.38 | 30.94±7.72 | 29.21±4.79 | 28.71±5.24 | 28.43±4.45 |  |
| Change | 0.31 (-2.03, 2.65), -1.02 (-2.93, 0.89) | 1.13 (-2.51, 4.76), -1.75 (-4.01, 0.51) | -0.50 (-3.84, -2.84), -0.29 (-3.82, -3.25) | 0.192 |
| ALT (IU/L) | 25.93±5.03 | 24.90±5.69 | 25.27±5.95 | 26.25±5.34 | 24.69±5.83 | 25.88±5.66 | 25.57±4.83 | 25.14±5.74 | 24.57± 6.42 |  |
| Change | -0.99 (-1.93, -0.06), 0.31 (-1.27, -1.89) | -1.56 (-2.99, -0.13), 1.19 (-1.38, -3.76) | -0.43 (-1.80, -0.94), -0.57 (-2.64, -1.50) | 0.797 |
| Data are means ± SD, or 95% CI. p < 0.05 was considered significant.SGLT2: Sodium glucose cotransporter 2, BMI: Body mass index, WC: Waist circumference, BP: Blood pressure, FPG: Fasting plasma glucose, PPBG: Postprandial blood glucose, HbA1C: Hemoglobin A1C, TC: Total cholesterol, TG: Triglycerides, HDL-C: High-density lipoprotein cholesterol, LDL-C: Low-density lipoprotein cholesterol, AST: Aspartate aminotransferase, ALT: Alanine aminotransferase. a p < 0.05 (comparison between before treatment and after treatment in all subjects)b p < 0.05 (comparison between before treatment and after treatment in each group) |

Table 2: Change from baseline to treatment with metformin, before and after add-on therapy of SGLT2 inhibitors on clinical and biochemical variables in overweight type 2 diabetes.