Supplementary material

Supplementary Table 1. Interperiod comparison of diabetic medications used before admission.

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| --- | --- |
|  | Periods |
|  | N | Ts | Td |
|  | n = 36 | n = 22 | n = 26 |
| None | 21 | 15 | 14 |
| DPP4 only | 2 | 0 | 1 |
| SU only | 2 | 1 | 3 |
| αGI only | 0 | 0 | 2 |
| DPP4 + Big | 4 | 0 | 0 |
| DPP4 + SU | 1 | 5 | 4 |
| Big + SU | 3 | 0 | 0 |
| DPP4 + Big + SU | 2 | 1 | 1 |
| Big + SU + αGI | 0 | 0 | 1 |
| DPP4 + Big + SU + αGI | 1 | 0 | 0 |

αGI, alpha-glucosidase inhibitor; Big, biguanide; N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; DPP4, dipeptidyl peptidase-4 inhibitors; N, number; SU, sulfonylurea; TER, total energy restriction.

Supplementary Table 2. Interperiod comparison of DPP4, SU, Big, and αGI use before admission.

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| --- | --- |
|  | Periods |
|  | N | Ts | Td |
|  | n = 36 | n = 22 | n = 26 |
| DPP4 | 10 | 6 | 6 |
| No DPP4 | 26 | 16 | 20 |
| SU | 9 | 7 | 9 |
| No SU | 27 | 15 | 17 |
| Big | 10 | 1 | 2 |
| No Big | 26 | 21 | 24 |
| αGI | 1 | 0 | 3 |
| No αGI | 35 | 22 | 23 |

αGI, alpha-glucosidase inhibitor; Big, biguanide; N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; DPP4, dipeptidyl peptidase-4 inhibitors; n, number; SU, sulfonylurea; TER, total energy restriction.

Supplementary Table 3. Interperiod comparison of diabetic medications used during hospitalization.

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| --- | --- |
|  | Periods |
|  | N | Ts | Td |
|  | n = 36 | n = 22 | n = 26 |
| None | 7 | 2 | 2 |
| DPP4 | 12 | 2 | 3 |
| Big | 1 | 0 | 0 |
| SU | 0 | 0 | 3 |
| αGI | 0 | 0 | 1 |
| DPP4 + Big | 5 | 7 | 0 |
| DPP4 + αGI | 1 | 3 | 3 |
| DPP4 + SU | 0 | 0 | 3 |
| αGI + SU | 0 | 1 | 1 |
| DPP4 + Big + αGI | 3 | 2 | 1 |
| DPP4 + αGI + SU | 0 | 1 | 4 |
| LIA | 1 | 0 | 1 |
| αGI + LIA | 0 | 0 | 1 |
| DPP4 + LIA | 4 | 2 | 1 |
| DPP4 + αGI + LIA | 0 | 1 | 1 |
| DPP4 + Big + LIA | 2 | 1 | 0 |
| DPP4 + αGI + SU + LIA | 0 | 0 | 1 |

αGI, alpha-glucosidase inhibitor; Big, biguanide; N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; DPP4, dipeptidyl peptidase-4 inhibitors; LIA, long-acting insulin analog; n, number; SGLT2i, sodium-glucose cotransporter 2 inhibitors; SU, sulfonylurea, TER, total energy restriction.

Supplementary Table 4. Interperiod comparison of SGLT2i, DPP4, SU, Big, and αGI use during hospitalization.

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| --- | --- | --- |
|  | Periods |  |
|  | N | Ts | Td |  |
|  | n = 36 | n = 22 | n = 26 | *p*-Value |
| SGLT2i | 36 | 0 | 0 | <0.0001 |
| No SGLT2i | 0 | 22 | 26 |
| DPP4 | 27 | 19 | 17 | 0.2356 |
| No DPP4 | 9 | 3 | 9 |
| SU | 0 | 2 | 12 | <0.0001 |
| No SU | 36 | 20 | 14 |
| Big | 11 | 10 | 1 | 0.0012 |
| No Big | 25 | 12 | 25 |
| αGI | 4 | 8 | 13 | 0.0022 |
| No αGI | 32 | 14 | 13 |

αGI, alpha-glucosidase inhibitor; Big, biguanide; N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; DPP4, dipeptidyl peptidase-4 inhibitors; n, number; SGLT2i, sodium-glucose cotransporter 2 inhibitors; SU, sulfonylurea, TER, total energy restriction.

Supplementary Table 5. Evaluation of changes in blood glucose levels in each period using the Wilcoxon signed-rank test.

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| --- | --- | --- | --- | --- | --- | --- |
| Periods | At admission mmol/L | Day 3 mmol/L | *p*-value | Day 3 mmol/L | Day 7 mmol/L | *p*-value |
| N | 14.4 (12.2–18.6) | 9.0 (7.6–10.7) | <0.0001 | 9.0 (7.6–10.7) | 6.4 (5.8–7.0) | <0.0001 |
| Ts | 14.6 (12.7–16.9) | 9.7 (8.5–10.9) | <0.0001 | 9.7 (8.5–10.9) | 8.2 (6.8–10.3) | 0.0118 |
| Td | 14.2 (13.1–16.3) | 9.9 (7.5–11.2) | <0.0001 | 9.9 (7.5–11.2) | 8.0 (6.4–8.7) | 0.0008 |

All values are presented as median (interquartile range). N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; SGLT2i, sodium-glucose cotransporter 2 inhibitors; TER, total energy restriction.

Supplementary Table 6. Comparison of fasting blood glucose levels on day 7. Multiple pairwise comparisons using the Dunn method.

|  |  |  |
| --- | --- | --- |
| Periods comparison | glucose level on day 7, mmol/L | *p*-value |
| N *vs.* Ts | 6.4 (5.8–7.0) *vs.* 8.2 (6.8–10.3) | 0.0004 |
| N *vs.* Td | 6.4 (5.8–7.0) *vs.* 8.0 (6.4–8.7) | 0.0182 |
| Ts *vs.* Td | 8.2 (6.8–10.3) *vs.* 8.0 (6.4–8.7) | 0.8099 |

All values are presented as median (interquartile ranges). N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; carb, carbohydrate; SGLT2i, sodium-glucose cotransporter 2 inhibitors; TER, total energy restriction; *vs.*, versus.

Supplementary Table 7. Comparisons of achievement frequency of fasting blood glucose levels on day 7 of <7.0 mmol/L (126 mg/dL) among all pairs of three periods with Bonferroni correction.

|  |  |  |  |
| --- | --- | --- | --- |
| Periods comparison | FBG level <7.0 mmol/L on day 7 | *p*-value | *B*-correction |
| N *vs.* Ts | 26 (72.2%) *vs.* 7 (31.8%) | 0.0024 | <0.05/3 |
| N *vs.* Td | 26 (72.2%) *vs.* 8 (30.8%) | 0.0011 | <0.05/3 |
| Ts *vs.* Td | 7 (31.8%) *vs.* 8 (30.8%) | 0.9377 | >0.05/3 |

*B*, Bonferroni; N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; FBG, fasting blood glucose; SGLT2i, sodium-glucose cotransporter 2 inhibitors; TER, total energy restriction; *vs.*, versus.

Supplementary Table 8. Comparison of SU, Big, and αGI use during hospitalization between Td and Ts periods with Bonferroni correction.

|  |  |  |  |
| --- | --- | --- | --- |
| SU, Big, or αGI use | Td *vs.* Ts | *p*-value | *B*-correction |
| SU | 12 (46.2%) *vs.* 2 (9.1%) | 0.0033 | <0.05/3 |
| Big | 1 (3.9%) *vs.* 10 (45.5%) | 0.0003 | <0.05/3 |
| αGI | 13 (50.0%) *vs.* 8 (36.4%) | 0.3414 |  |

αGI, alpha-glucosidase inhibitor; *B*, Bonferroni; Big, biguanide; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; SGLT2i, sodium-glucose cotransporter 2 inhibitors; SU, sulfonylurea, TER, total energy restriction; *vs.*, versus.

Supplementary Table 9. Comparison of long-acting insulin analog therapy at discharge.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | N | Ts | Td | *p*-value |
|  | n = 36 | n = 22 | n = 26 |  |
| LIA | 7 | 4 | 5 | 1.0000 |
| No LIA | 29 | 18 | 21 |  |

N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; LIA, long-acting insulin analog; n, number; TER, total energy restriction.

Supplementary Table 10. Interperiod comparison of long-acting insulin-analog doses at discharge.

|  |  |  |
| --- | --- | --- |
|  | Periods |  |
|  | N | Ts | Td | *p*-value |
|  | n = 7 | n = 4 | n = 5 |  |
| LIA dose, units | 6 (5–8) | 9 (5–10) | 15 (3.5–25) | 0.5526 |

All values are presented as median (interquartile ranges). N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; LIA, long-acting insulin analog; p, number; TER, total energy restriction.

Supplementary Table 11. Interperiod comparisons of urine glucose on day 7 in all pairs of the three periods using the Dunn method.

|  |  |  |
| --- | --- | --- |
| Periods comparison | Urine glucose on day 7 | *p*-value |
| N *vs.* Ts | 4 (4–4) *vs.* 0.3 (0–3) | <0.0001 |
| N *vs.* Td | 4 (4–4) *vs.* 0 (0–1.8) | <0.0001 |
| Ts *vs.* Td | 0.3 (0–3) *vs.* 0 (0–1.8) | 1.0000 |

All values are presented as median (interquartile range). N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; SGLT2i, sodium-glucose cotransporter 2 inhibitors; TER, total energy restriction.

Supplementary Table 12. Interperiod comparisons of urine ketones on day 7 in all pairs of the three periods using the Dunn method.

|  |  |  |
| --- | --- | --- |
| Periods comparison | Urine ketones on day 7 | *p*-value |
| N *vs.* Ts | 2 (0.5–3) *vs.* 0 (0–0) | 0.0017 |
| N *vs.* Td | 2 (0.5–3) *vs.* 0 (0–0) | 0.0009 |
| Ts *vs.* Td | 0 (0–0) *vs.* 0 (0–0) | 1.0000 |

All values are presented as median (interquartile range). N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; SGLT2i, sodium-glucose cotransporter 2 inhibitors; TER, total energy restriction.

Supplementary Table 13. Changes in hematocrit levels in the three periods.

|  |  |  |  |
| --- | --- | --- | --- |
| Periods | Hct level at adm, % | Hct level on day 7, % | *p*-value |
| N | 43.3 (39.7–45.6) | 40.5 (38.9–43.1) | 0.0297 |
| Ts | 44.1 (40.5–46.7) | 41.7 (39.1–45.1) | 0.0003 |
| Td | 42.4 (40.0–45.1) | 40.5 (38.0–43.3) | 0.0023 |

All values are presented as median (interquartile range). adm, admission; Hct, hematocrit; N, a 40%-carbohydrate diet based on TER with SGLT2i in the novel period; Ts, a 40%-carbohydrate diet based on TER in the transition period; Td, a 60%-carbohydrate diet based on TER in the traditional period; SGLT2i, sodium-glucose cotransporter 2 inhibitors; TER, total energy restriction.