**Supplementary Figure S1. Measurement of erythrocyte aggregation using the modified erythrocyte sedimentation rate method.**

A: Snap shots with a digital camera at intervals of five minutes for three hours;
B: Regression analysis with three fitted parameters (α: initial value, β: fitting constant, λ: characteristic time).

RBC, Red blood cell.



**Supplementary Figure S2. Holotomographic images of erythrocytes according to group.**A: 2D membrane height maps of erythrocytes;
B: Reconstructed 3D images of erythrocytes.

DPP-4 inhibitor, dipeptidyl peptidase 4 inhibitor; SGLT-2 inhibitor, sodium-glucose cotransporter 2 inhibitor.



**Supplementary Figure S3. Distribution of propensity scores.**

Treatment group: SGLT-2 inhibitor group;
Control group: DPP-4 inhibitor group.

SGLT-2 inhibitor, sodium-glucose cotransporter 2 inhibitor; DPP-4 inhibitor, dipeptidyl peptidase 4 inhibitor.



**Supplementary Table S1. Medical treatment at baseline.**

|  |  |  |
| --- | --- | --- |
|  | Before propensity score matching | After propensity score matching |
| Total(n = 63) | DPP-4 inhibitor(n = 38) | SGLT-2 inhibitor(n = 25) | p-value | DPP-4 inhibitor(n = 19) | SGLT-2 inhibitor(n = 19) | p-value |
| HMG-CoA reductase inhibitor | 30 (78.9) | 19 (76.0) | 0.783 | 13 (68.4) | 16 (84.2) | 0.447 |
| Ezetimibe | 3 (7.9) | 2 (8.0) | 1.000 | 1 (5.3) | 2 (10.5) | 1.000 |
| Fenofibrate | 5 (13.2) | 1 (4.0) | 0.389 | 3 (15.8) | 1 (5.3) | 0.604 |
| Omega-3-acid ethyl ester 90 | 1 (2.6) | 1 (4.0) | 1.000 | 1 (5.3) | 1 (5.3) | 1.000 |
| RAS blockade | 17 (44.7) | 9 (36.0) | 0.491 | 8 (42.1) | 6 (31.6) | 0.501 |
| Calcium channel blocker | 8 (21.1) | 4 (16.0) | 0.749 | 4 (21.1) | 2 (10.5) | 0.660 |
| β-blocker | 4 (10.5) | 0 (0.0) | 0.145 | 3 (15.8) | 0 (0.0) | 0.230 |
| Thiazide | 1 (2.6) | 2 (8.0) | 0.557 | 0 (0.0) | 0 (0.0) | - |
| Aspirin | 7 (18.4) | 2 (8.0) | 0.298 | 5 (26.3) | 2 (10.5) | 0.405 |
| ADP receptor inhibitor | 1 (2.6) | 0 (0.0) | 1.000 | 1 (5.3) | 0 (0.0) | 1.000 |

Data are expressed as the number with (percentage).

DPP-4 inhibitor, dipeptidyl peptidase 4 inhibitor; SGLT-2 inhibitor, sodium-glucose cotransporter 2 inhibitor;

HMG-CoA inhibitor, 3-hydroxy-3-methyl coenzyme A reductase inhibitor;

RAS blockade, renin-angiotensin system blockade;

ADP receptor inhibitor, adenosine diphosphate receptor inhibitor.

**Supplementary Table S2. Standardized difference before and after propensity score matching.**

|  |  |
| --- | --- |
|  | Standardized difference |
| Variables | Before propensity score matching | After propensity score matching |
| Age (years) | -4.783 | 1.469 |
| Sex (male) | -0.120 | 0 |
| Body mass index (kg/m2) | 13.521 | -0.599 |
| Systolic blood pressure (mmHg) | 0.626 | -0.104 |
| Diastolic blood pressure (mmHg) | 0.987 | -1.3623 |
| HbA1c (%) | 77.382 | 4.111 |
| Total cholesterol (mg/dL) | 1.660 | -0.327 |
| High density lipoprotein (mg/dL) | 1.251 | -0.068 |
| Low density lipoprotein (mg/dL) | 1.746 | -0.379 |
| Triglycerides (mg/dL) | 0.472 | -0.044 |
| Disease duration (years) | -9.643 | 1.790 |
| Current smoker | -0.255 | 0 |