

Supplemental table S1. Baseline characteristics of the patients completing the study.

	ALL (N=60)	Sitagliptin (N=30)	Mitiglinide (N=30)	P*
Male Female	37 23	18 12	19 11	
Age (years)	63.5 ± 12.0	61.0 ± 13.8	65.8 ± 9.7	0.126
Diabetes duration (years)	9.7 ± 9.2	7.2 ± 7.5	12.1 ± 10.2	0.044
Duration of use insulin (years)	4.3 ± 5.6	3.6 ± 3.6	5.0 ± 7.0	0.330
OHA (metformin/pioglitazone)	4/2	1/1	3/1	
ARB/CCB/Diuretic/Others	25/18/12/5	11/10/6/2	14/8/6/3	
Statin/Ezetimib/Others	21/4/2	11/2/0	10/2/2	
Insulin dose (IU/day)	21.3 ± 8.8	20.9 ± 8.4	21.7 ± 9.4	0.741
Insulin dose/BW (IU/kgday)	0.34 ± 0.13	0.34 ± 0.13	0.34 ± 0.13	0.896
Body weight (kg)	62.9 ± 13.4	62.5 ± 11.5	63.2 ± 15.2	0.843
Body mass index (kg/m ²)	24.3 ± 4.2	24.5 ± 3.8	24.2 ± 4.6	0.800
Waist circumference (cm)	87.5 ± 12.6	87.4 ± 11.4	87.5 ± 13.9	0.971
Systolic blood pressure (mmHg)	125.4 ± 14.3	127.8 ± 16.7	123.2 ± 11.4	0.029
Fasting plasma glucose (mg/dl)	147.8 ± 36.3	149.8 ± 37.2	145.8 ± 35.9	0.674
HbA1c (%)	6.8 ± 0.7	6.7 ± 0.6	6.9 ± 0.8	0.096
BUN (mg/dl)	16.1 ± 4.9	15.6 ± 4.4	16.6 ± 5.3	0.444
Cre (mg/dl)	0.75 ± 0.22	0.69 ± 0.19	0.81 ± 0.23	0.036
Serum aspartate aminotransferase (IU/L)	26.4 ± 15.3	22.9 ± 7.4	29.9 ± 19.8	0.077
Serum alanine aminotransferase (IU/L)	28.3 ± 24.8	23.7 ± 14.5	32.8 ± 31.3	0.158
Plasma gamma-glutamyltransferase (IU/L)	31.8 ± 24.5	31.7 ± 17.0	31.9 ± 30.4	0.974
Total cholesterol (mg/dl)	183.7 ± 28.2	184.9 ± 32.3	182.6 ± 24.0	0.751
Triglycerides (mg/dl)	109.4 ± 46.6	112.4 ± 47.0	106.4 ± 45.7	0.720
HDL-C (mg/dl)	61.6 ± 28.4	67.4 ± 36.1	56.0 ± 17.0	0.131
sdLDL (mg/dl)	30.2 ± 11.4	32.6 ± 13.8	28.0 ± 8.1	0.124
Fasting serum insulin (IU/L)	9.4 ± 7.4	10.1 ± 6.5	9.3 ± 7.7	0.641
CPR (ng/ml)	1.9 ± 0.8	2.0 ± 0.9	1.8 ± 0.7	0.284
1,5-anhydroglucitol (mg/ml)	12.0 ± 6.6	12.2 ± 6.6	11.9 ± 6.7	0.897
Leptin (ng/ml)	9.4 ± 10.4	8.4 ± 6.5	10.3 ± 13.3	0.498
Adiponectin (µg/ml)	4.8 ± 4.0	4.6 ± 3.9	5.0 ± 4.3	0.679
TNF-alpha (pg/ml)	2.4 ± 1.1	2.8 ± 1.7	2.0 ± 1.9	0.574
HOMA-beta	47.3 ± 21.4	44.2 ± 28.3	50.3 ± 25.0	0.577
CPI	1.3 ± 0.6	1.2 ± 0.5	1.4 ± 0.7	0.142

Data are means \pm standard deviation. *P-value for the intragroup comparison. OHA, oral hypoglycemic agent; ARB, angiotensin receptor blocker; CCB, calcium channel blocker; HDL-C, high-density lipoprotein cholesterol; sdLDL, small dense low-density lipoprotein; CPR, C-peptide immunoreactivity; TNF, tumor necrosis factor; HOMA, homeostasis model assessment of insulin resistance; CPI, C-peptide immunoreactivity index

Supplemental table S2. Factors associated with changes in glycated hemoglobin (HbA1c) level.

	ALL		Sitagliptin		Mitiglinide	
	R	P	R	P	R	P
Age (years)	0.085	0.532	0.311	0.107	-0.135	0.484
Diabetes duration (years)	0.021	0.878	0.329	0.087	-0.175	0.365
Duration of use insulin (years)	-0.156	0.245	-0.045	0.819	-0.222	0.247
insulin dose (IU/day)	0.459	0.000	0.530	0.004	0.455	0.013
insulin dose /BW (IU/kg)	0.285	0.032	0.571	0.001	0.161	0.405
Body weight (kg)	0.316	0.017	-0.118	0.551	0.498	0.006
Body mass index (kg/m ²)	0.183	0.173	-0.159	0.420	0.352	0.061
Waist circumference (cm)	0.288	0.030	-0.036	0.857	0.440	0.017
Fasting plasma glucose (mg/dl)	0.175	0.194	0.270	0.165	0.138	0.475
HbA1c (%)	0.198	0.140	0.135	0.492	0.161	0.406
CPR (ng/ml)	-0.099	0.482	-0.340	0.096	-0.033	0.868
Arg ΔCPR	-0.207	0.137	-0.038	0.854	-0.285	0.149
CPI	-0.141	0.341	-0.417	0.038	-0.096	0.627
EPA	0.133	0.343	0.009	0.967	0.182	0.363
DHA	0.192	0.168	0.104	0.614	0.283	0.152
D6D	0.170	0.220	0.119	0.554	0.193	0.334
D5D	-0.180	0.194	0.260	0.189	-0.364	0.062
ΔγGTP	0.160	0.235	0.210	0.284	0.227	0.237
ΔTG	-0.068	0.614	-0.132	0.503	0.140	0.468
ΔHDL-C	0.064	0.638	-0.063	0.750	0.213	0.266
ΔBW	-0.325	0.014	-0.104	0.598	-0.459	0.012
ΔBMI	-0.301	0.023	-0.102	0.607	-0.454	0.013
ΔWC	-0.156	0.247	-0.003	0.987	-0.316	0.095
ΔCPI	-0.281	0.044	-0.023	0.914	-0.343	0.074
ΔD6D	-0.211	0.130	0.366	0.066	-0.310	0.116
ΔD5D	0.152	0.276	-0.491	0.011	0.337	0.085

CPR, C-peptide immunoreactivity; CPI, CPR index; EPA, eicosapentaenoic acid; DHA, docosahexaenoic acid; D5D, delta-5 desaturase; D6D, delta-6 desaturase.