

<i>Variables</i>	<i>IS (n=8)</i>	<i>IR (N=21)</i>	<i>T2DM (N=11)</i>	<i>p value</i>	<i>Metformin (n=5)</i>	<i>Metformin+Insulin (n=5)</i>	<i>p value</i>
Age (year)	35.1 (13.2)	32.3 (10.6)	41.5 (11.7)	0.1	47.6 (7.8)	41.4 (10.2)	0.31
BMI (kg.m⁻²)	43.2 (4.7)	44.3 (7.5)	42.9 (6.9)	0.08	45.4 (8.9)	42.2 (6.0)	0.52
SBP (mmHg)	135.8 (21.4)	131.6 (24.8)	127.1 (10.7)	0.18	130.8 (6.7)	122.2 (15.1)	0.28
DBP (mmHg)	73 (10.5)	76.7 (12.9)	74.67 (7.7)	0.5	77.4 (6.9)	68.6 (6.7)	0.08
MAP	93.9 (6.7)	94.9 (14.4)	92.7 (8.8)	0.3	96.5 (8.9)	86.5 (9.0)	0.10
TC (mmol/L)	3.9 (1.8)	4.9 (0.98)	5.1 (0.8)	0.04	4.8 (0.7)	5.5 (0.4)	0.12
LDL (mmol/L)	2.4 (1.2)	3.1 (1.1)	3.1 (0.7)	0.09	2.8 (0.8)	3.3 (0.6)	0.25
TAG (mmol/L)	1.1 (0.9)	1.2 (0.5)	1.99 (0.99)	0.12	1.8 (0.9)	2.4 (1.1)	0.25
HDL (mmol/L)	1.1 (0.5)	1.4 (0.6)	1.3 (0.3)	0.47	1.3 (0.1)	1.1 (0.4)	0.44
Leptin (ng/ml)	57.9 (20.1)	50.9 (20.03)	39.9 (27.3)	0.1	59.2 (37.4)	38.3 (22.6)	0.32
IL-6 (pg/ml)	3.05 (1.6)	4.5 (1.96)	3.95 (1.92)	0.32	6.1 (1.6)	3.2 (0.7)	0.02
FPG (mmol/L)	6.6 (4.8)	6.2 (2.02)	9.98 (6.2)	0.58	6.1 (1.1)	10.2 (6.8)	0.29
Insulin (mIU/L)	7.7 (1.4)	15.8 (6.7)	15.2 (6.8)	0.001	13.5 (7.0)	18.6 (8.4)	0.38
HOMA-IR	2.2 (1.4)	4.3 (2.3)	6.2 (3.2)	0.001	3.9 (2.6)	7.2 (2.8)	0.13
Hba1c%	-	-	6.7 (0.9)	-	6.6 (0.9)	6.9 (1.0)	0.70

Table S1. General characteristics of cohort. Recruited obese and morbidly obese patients were dichotomized into three groups [insulin sensitive (IS), insulin resistant (IR), type 2 diabetes mellitus (T2DM)]. The T2DM group was further divided into patients on metformin and patients on metformin and insulin. BMI (body mass index), SBP (systolic blood pressure), DBP (diastolic blood pressure), MAP (mean arterial blood pressure), TC (Total Cholesterol), LDL (low density lipoprotein), TAG (Triacylglycerol). HDL (high density lipoprotein), FPG (fasting plasma glucose), HOMA-IR and Hba1c (glycated hemoglobin) were measured in IS, IR and T2DM (total, metformin group and metformin and insulin group) subjects. Data are presented as mean (SD). Differences between IS, IR and T2DM groups were tested by ANOVA. Differences between metformin and combined metformin/insulin groups were tested by independent sample t test or Mann Whitney u test., P<0.05.