

Supplementary Table1. Clinical and biochemical parameters of the control and PCOS groups divided by androgenic condition.

Features	Control (n=64)	NHA-PCOS (n=15)	HA- PCOS (n=80)	P	p Control vs. NHA*	p Control vs. HA*	p NHA vs HA*
Age (years)	26.97±4.19a	27.47±5.52ab	25.24±4.77	0.03			
aTL (Kbp)	15.19±8.19	12.91±10.63	20.89±13.03	<0.01	0.66	<0.01	0.04
BMI (kg/m ²)	22.02±2.48a	32.52±7.31b	30.31±7.73b	0.001	0.001	0.001	0.31
Weigth (kg)	60.60±5.49a	77.91±20.31b	78.55±20.61b	0.001	0.001	0.001	0.33
WC (cm)	74.77±8.47a	98.10±13.36b	92.50±17.38b	0.001	0.001	0.001	0.19
SBP (mmHg)	110 (110-120)	110 (110-130)	110 (110-130)	0.32	0.92	0.09	0.08
DBP (mmHg)	70 (70-80)	70 (70-80)	70 (70-80)	0.38	0.25	0.09	0.35
TC (mg/dL)	159.57±24.19a	201.50±45.84b	185.85±38.66b	0.03	0.001	0.001	0.44
HDL-C (mg/dL)	52.79±12.96	52.45±15.51	51.16±13.57	0.60	0.65	0.54	0.83
LDL-C (mg/dL)	88.60 (88.6-105.1)a	135.50 (135.50-166.25)b	105.50 (107-137)b	0.001	0.001	0.001	0.05
TG (mg/dL)	61±28.33a	123.69±54.07b	107.54± 54.33b	0.001	0.001	0.001	0.11
Glucose (mg/dL)	82.14±8.66a	92.92±12.01b	89.85±12.15b	0.001	0.001	0.001	0.12
Insulin (mg/dL)	7.61(7.61-11.12)a	13.80 (13.80-15.90)b	12.95 (13-21)b	0.001	0.001	0.001	0.89
HOMA-IR	1.64 (1.64-2.35)a	2.95(2.95-4.11)b	2.73(2.75-4.78)b	0.001	0.001	0.001	0.73
QUICKI	0.36±0.03a	0.32±0.04b	0.33±0.03b	0.001	0.001	0.001	0.65

Values are expressed as mean ± SD (ANOVA and post-hoc Bonferroni) or Median and 25-75 interquartile range (Kruskall Wallis Test). NHA-PCOS: Non hyperandrogenic PCOS phenotype, HA-PCOS: Hyperandrogenic PCOS phenotype, BMI: Body mass index, WC: waist circumference, SBP: Systolic blood pressure, DBP: Diastolic blood pressure, TC: Total cholesterol, HDL-C: High density cholesterol, LDL-C: Low density cholesterol, TG: Triglycerides, HOMA-IR: Homeostasis model assessment of insulin resistance, QUICKY: Quantitative Insulin Sensitivity Check Index. Different letters a and b express statistical difference between groups in univariate analysis. P<0.05 was considered as significant. p value* adjusted by age (ANCOVA) for control vs. PCOS phenotypes and between PCOS subphenotypes.

Supplementary Table 2. Clinical and biochemical parameters of the control and PCOS groups divided by obesity condition.

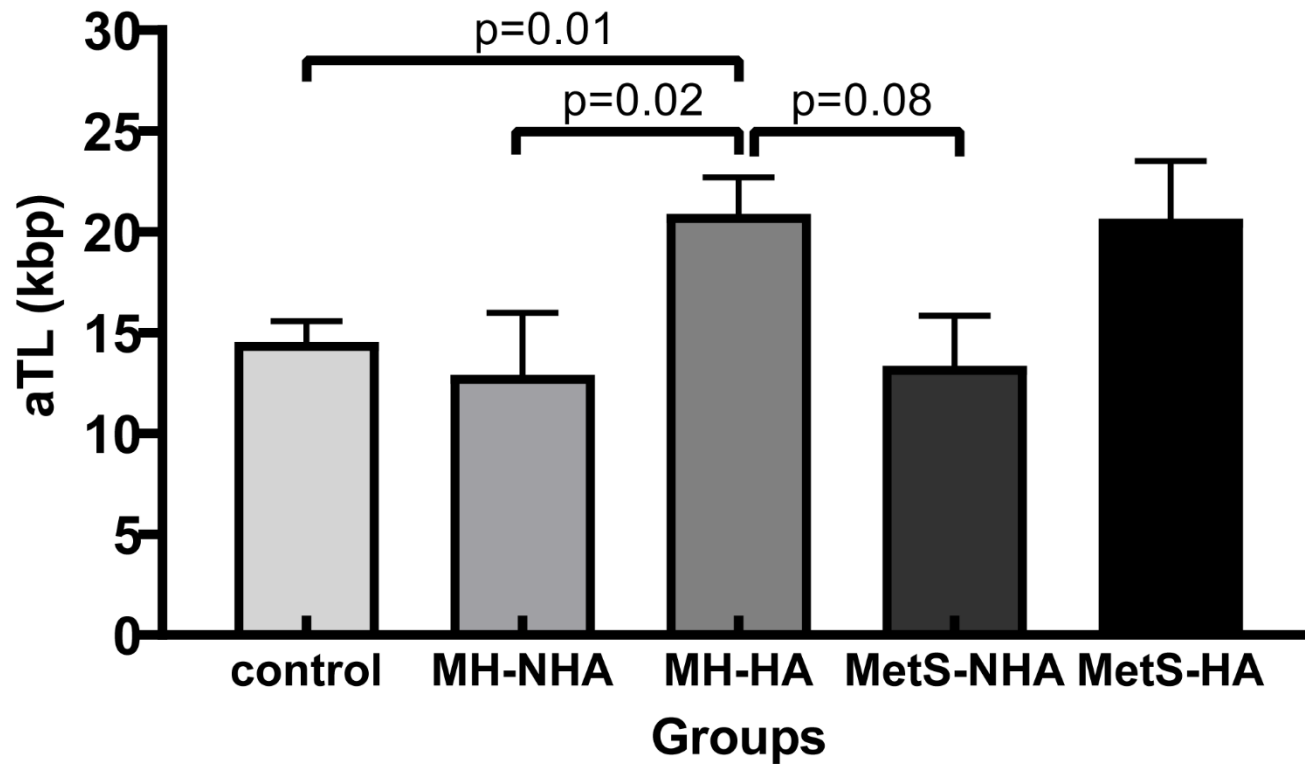
Features	Control (n=64)	noOB-PCOS (n=72)	OB-PCOS (n=78)	P	p Control vs noOB*	p Control vs OB *	p noOB vs OB*
Age (years)	26.97±4.19	25.00 (22.00-30.00)	25.50 (23.00-30.00)	0.133			
aTL (Kpb)	14.5±8.3a	20.7±12.9b	17.4±11.3ab	0.008	0.001	0.354	0.110
BMI (kg/m ²)	22.02±2.48a	24.68±3.20b	37.43±5.51c	<0.001	<0.001	<0.001	<0.001
Weigth (kg)	60.2±5.49a	62.7±10.27a	92.30 (83.60-103.00)b	<0.001	0.624	<0.001	<0.001
WC (cm)	74.77±8.47a	82.1±10.32b	107.18±11.91c	<0.001	<0.001	<0.001	<0.001
SBP (mmHg)	115 (110-120)a	102 (90-120)b	110 (100-130)a	0.046	0.008	0.407	<0.001
DBP (mmHg)	70 (70-80)	70 (60-80)	70 (70-80)	0.009	0.004	0.676	0.007
TC (mg/dL)	158.79±23.57a	183.50±39.17b	187 (163.25-219.75)b	<0.001	<0.001	<0.001	0.892
HDL-C(mg/dL)	52 (44-57)a	56.15±15.31 ^a	44 (38-51)b	<0.001	0.478	0.004	<0.001
LDL-C	91.85±21.88a	103.50 (88.25-132.75)b	120.21±30.82c	<0.001	0.003	<0.001	0.152
TG (mg/dL)	60 (49-94)a	97.00 (66.75-140.75)b	123 (93-176)c	<0.001	<0.001	<0.001	0.011
Glucose	81.90±8.41a	86 (81-94)b	91.81±12.48c	<0.001	0.003	<0.001	0.107
Insulin (mg/dL)	8.56±4.08a	10.60 (5.55-13.30)b	19.00 (13.85-25.78)c	<0.001	0.134	<0.001	<0.001
HOMA-IR	1,75±0.87a	2.20 (1.18-3.02)b	4.34 (3.04-5.75)c	<0.001	0.409	<0.001	<0.001
QUICKI	0.36 (0.34-0.38)a	0.34 (0.32-0.37)b	0.31 (0.29-0.32)c	<0.001	0.123	<0.001	<0.001

Values are expressed as mean ± SD (ANOVA and post-hoc Bonferroni). Median and 25-75 interquartile range (Kruskall Wallis Test). P value: univariate analysis. Different letters a, b and c express statistical difference between groups in univariate analysis., noOB-PCOS: non obese PCOS women, OB-PCOS: Obese PCOS, aTL: Absolute telomere length, BMI: Body mass index, WC: waist circumference, SBP: Systolic blood pressure, DBP: Diastolic blood pressure, TC: Total cholesterol, HDL-C: High density cholesterol, LDL-C: Low density cholesterol, TG: Triglycerides, HOMA-IR: Homeostasis model assessment of insulin resistance, QUICKY: Quantitative Insulin Sensitivity Check Index. P<0.05 was considered as significant. p value* adjusted by age (ANCOVA) for control vs. PCOS with and without obesity and intra PCOS.

Supplementary Table 3. Clinical and biochemical parameters of the control and PCOS groups divided by metabolic condition.

Features	Control (n=64)	MH-PCOS (n=64)	MetS-PCOS (n=20)	P	p Control vs. MH*	p Control vs. MetS*	p MH vs MetS*
Age (years)	26.77±4.36a	23.00 (21.00-29.75)b	29 (23-31)a	0.007			
aTL (Kpb)	14.32±8.03a	15.96 (9.68-26.94)b	18.82±10.38ab	0.07	0.008	0.151	0.442
BMI (kg/m ²)	22.11±2.56a	28.20 (22.97-34.71)b	34.20±5.49c	<0.001	<0.001	<0.001	0.028
Weigth (kg)	60.40±5.76a	71.00 (58.55-88.00)b	90.30±15.67c	<0.001	<0.001	<0.001	0.005
WC (cm)	73.69±7.52a	90.19±16.79b	104.87±11.29c	<0.001	<0.001	<0.001	0.003
SBP (mmHg)	115 (110-120)	107.5 (90.0-120.0)	117.35±21.22	0.082	0.023	0.329	0.052
DBP (mmHg)	70 (70-80)	70 (60-80)	70 (70-80)	0.458	0.017	0.847	0.196
TC (mg/dL)	159.89±24.52a	183.18±39.20b	204.63±40.92c	<0.001	<0.001	<0.001	0.012
HDL-C(mg/dL)	52 (44-57)a	53.75±12.67a	43.26±10.52b	0.002	0.597	0.002	0.003
LDL-C (mg/dL)	91.91±22.06a	102.0 (89.0-137.5)b	131.30±31.82c	<0.001	0.001	<0.001	0.016
TG (mg/dL)	60.0 (48.5-84.5)a	87.75±30.29b	173.95±59.24c	<0.001	0.001	<0.001	<0.001
Glucose (mg/dL)	81.85±8.78a	87.00 (81.22-93.00)b	98.70±11.29c	<0.001	0.002	<0.001	<0.001
Insulin (mg/dL)	8.92±4.37a	11.35 (7.90-18.84)b	19.05±9.16c	<0.001	<0.001	<0.001	0.076
HOMA-IR	1.73 (1.09-2.43)a	2.39 (1.43-4.36)b	4.57±2.30c	<0.001	0.001	<0.001	0.02
QUICKI	0.35 (0.33-0.38)a	0.34 (0.31-0.36)b	0.30 (0.30-0.32)c	0.003	0.005	<0.001	0.026

Values are expressed as mean ± SD (ANOVA and post-hoc Bonferroni). Median and 25-75 interquartile range (Kruskall Wallis Test). P value: univariate analysis. Different letters a, b and c express statistical difference between groups in univariate analysis. MH-PCOS: Metabolically Healthy PCOS, MetS-PCOS: PCOS with Metabolic Syndrome, aTL: Absolute telomere length, BMI: Body mass index, WC: waist circumference, SBP: Systolic blood pressure, DBP: Diastolic blood pressure, TC: Total cholesterol, HDL-C: High density cholesterol, LDL-C: Low density cholesterol, TG: Triglycerides, HOMA-IR: Homeostasis model assessment of insulin resistance, QUICKY: Quantitative Insulin Sensitivity Check Index. P<0.05 was considered as significant



Supplementary Figure 1. Comparisons of aTL between control group and PCOS phenotypes HA and NHA with and without MetS. Values are presented as mean aTL and standard errors. aTL: Absolute telomere length. Kbp: kilobase pairs. MetS: Metabolic syndrome, MH-NHA: non hyperandrogenic and metabolically healthy PCOS women, MH-HA: Hyperandrogenic and metabolically healthy PCOS women; MetS-NHA: non hyperandrogenic PCOS with MetS; MetS-HA: Hyperandrogenic PCOS with MetS. Univariate analysis adjusted by age (ANCOVA). $p < 0.05$ was considered as significant.