

Supplementary File

Diastolic dysfunction in men with severe obstructive sleep apnea syndrome but without cardiovascular or oxidative stress-related comorbidities

John Papanikolaou¹, Melpomeni Ntalapascha², Demosthenes Makris¹, Triantafyllia Koukoubani¹, Vasiliki Tsolaki¹, George Zakynthinos¹, Konstantinos Gourgoulisanis³, Epaminondas Zakynthinos¹

¹ *Department of Critical Care, University Hospital of Larissa, Larissa, Thessaly, Greece*

² *Department of Cardiology, University Hospital of Larissa, Larissa, Thessaly, Greece*

³ *Department of Pulmonology, University Hospital of Larissa, Larissa, Thessaly, Greece*

E-mail addresses of the authors:

John Papanikolaou: y_papanikolaou@hotmail.com

Melpomeni Ntalapascha: m_ntala@yahoo.com

Demosthenes Makris: appollon7@hotmail.com

Triantafyllia Koukoubani: fkoukoubani@hotmail.com

Vasiliki Tsolaki: vasotsolaki1@yahoo.com

George Zakynthinos: gzakynthinos2@gmail.com

Konstantinos Gourgoulisanis: kgourg@med.uth.gr

Epaminondas Zakynthinos: ezakynth@yahoo.com

Corresponding authors:

John Papanikolaou

E-mail: y_papanikolaou@hotmail.com

Address: Biopolis, 41110 Larissa, Greece,

Tel.: +302410682960, Fax: +302410670838

Supplementary Table 1. Baseline echocardiographic characteristics in our severe OSAS patients (n=42) and controls (n=25)

	Severe OSAS (N=42)	Controls (N=25)	P-value
Left ventricular measurements			
LVEF, %	63±5.8	59.2±3.6	0.104
IVSd, mm	9.54±1.08	9.17±1	0.162
PWd, mm	8.87±1.17	8.46±0.8	0.132
LVIDd, mm	48.27±4.29	48.78±3.23	0.612
LV mass, gr	145.87±35.69	136.67±24.97	0.261
LV mass index, gr.m ⁻²	69.62±16.77	67.96±10.95	0.661
RWT	0.36±0.05	0.34±0.05	0.017
E, m.sec ⁻¹	0.73±0.14	0.78±0.11	0.153
A, m.sec ⁻¹	0.76±0.19	0.67±0.13	0.028
E/A	0.99±0.2	1.22±0.28	<0.001
PV S-vel, cm.sec ⁻¹	0.54±0.09	0.56±0.09	0.432
PV D-vel, cm.sec ⁻¹	0.41±0.08	0.47±0.11	0.022
PV S/D ratio	1.38±0.37	1.23±0.24	0.095
LV Sm, cm.sec ⁻¹	9.77±2.43	9.17±1.35	0.262
LV Em, cm.sec ⁻¹	10.7±2.97	12.1±2.47	0.05
LV Am, cm.sec ⁻¹	11.63±2.87	9.37±2.48	0.002
E/Em average	8.05±2.18	7.68±1.32	0.447
LV tei index	0.40±0.1	0.44±0.08	0.078
Left atrial assement			
LA diameter, mm	35.11±3.9	33.39±2.83	0.06
LAV max, mL	45.33±18	41.66±12.1	0.370
LAV max/BSA, mL.m ⁻²	21.62±8.5	20.94±7	0.739
Passive LAEF	0.25±0.11	0.29±0.11	0.125
Active LAEF	0.33±0.11	0.35±0.09	0.522
Riaht ventricular measurements			
RVFAC, %	39.8±14.15	38.2±8.04	0.616
RV E/A	1.19±0.3	1.29±0.27	0.195
TV max velocity, m.sec ⁻¹	2.08±0.62	2.1±0.35	0.884
RVSP, mmHg	26±8.9	23.64±6.18	0.274
IVC,mm	14.5±3.68	13.14±2.33	0.191
RV Sm, cm.sec ⁻¹	13±2.94	12.5±2.32	0.472
RV Em, cm.sec ⁻¹	10.17±2.38	10.71±2.84	0.415
RV Am, cm.sec ⁻¹	13.49±3.54	13.49±4.2	0.995
RV Em/Am	0.79±0.26	0.85±0.29	0.406
RV Tei index	0.32±0.13	0.34±0.05	0.547
Right atrial assessment			
RAV max, mL	28.78±8	27.94±9.5	0.707
Passive RAEF	0.26±0.15	0.22±0.1	0.143
Active RAEF	0.25±0.09	0.29±0.12	0.088

OSAS= obstructive sleep apnea syndrome; DF= diastolic function; LV= left ventricular; LVEF= LV ejection fraction; IVSd= interventricular septum thickness at end-diastole; PWd= posterior wall thickness at end-diastole, LVIDd= LV internal diameter at end-diastole; RWT= relative wall thickness; E,A= transmitral inflow early and late peak diastolic velocity, respectively; PV= pulmonary vein; S,D= systolic, diastolic flow respectively; Sm,Em,Am= peak systolic, early and late diastolic TDI-derived mitral and tricuspid annular tissue velocities, respectively; LA= left atrial; LAV= LA volume; BSA= body surface area; LAEF= LA emptying fraction; RV= right ventricular; FAC= fractional area change; TV= tricuspid valve; IVC= inferior vena cava; RAV= right atrial volume; RAEF= right atrial emptying fraction