

## **Supplementary Data**

### **Section S1**

#### **Detailed description of the outpatient recruitment procedure for the apnoeic patients included in this study**

These apnoeic individuals were referred to the sleep laboratory by physicians specialised in sleep medicine after an outpatient consultation during which a preliminary assessment of their complaints related to sleep, their ongoing psychotropic/somatic treatments and their somatic/psychiatric comorbidities was systematically performed in order to allow a first diagnostic hypothesis. These polysomnographic examinations were performed in these apnoeic individuals to allow an objective assessment of their sleep complaints and confirm the suspicion of OSAS highlighted during the outpatient assessment.

## Section S2 Detailed description of the diagnostic criteria used for the conventional cardiovascular risk factors

In all apnoeic individuals included in this study, conventional cardiovascular risk factors were considered present according to the following criteria:

- Type 2 diabetes (*American Diabetes Association* diagnostic criteria): glycated haemoglobin (HbA1c)  $\geq 6.5\%$  or fasting plasma glucose  $\geq 126$  mg/dl or two-hour plasma glucose  $\geq 200$  mg/dl during an oral glucose tolerance test or random plasma glucose  $\geq 200$  mg/dl in patients with classic symptoms of hyperglycaemia or self-reported diagnosis of clinically demonstrated type 2 diabetes or taking antidiabetic medication [24]. In the absence of unequivocal hyperglycaemia, criteria 1–3 should be confirmed by repeat testing. In addition, diabetes must have begun in adulthood [24].
- Hypertension (*World Health Organization* diagnostic criteria): mean systolic blood pressure  $\geq 140$  mmHg or mean diastolic blood pressure  $\geq 90$  mmHg or self-reported diagnosis of clinically demonstrated hypertension or use of antihypertensive medication [25]. In treated hypertensive individuals, controlled hypertension was defined as the presence of mean systolic blood pressure  $< 140$  mmHg and mean diastolic blood pressure  $< 90$  mmHg whereas uncontrolled hypertension was defined as the presence of mean systolic blood pressure  $\geq 140$  mmHg and/or mean diastolic blood pressure  $\geq 90$  mmHg [25].
- Dyslipidemia (*International Diabetes Federation* diagnostic criteria): plasma triglyceride level  $\geq 150$  mg/dl or plasma HDL-cholesterol level  $< 40$  mg/dl for men or plasma HDL-cholesterol level  $< 50$  mg/dl for women or use of treatment for dyslipidaemia [26].

- Cardiovascular comorbidities (excluding hypertension): presence of one or more comorbid cardiovascular pathologies (cardiac arrhythmias, non-ischemic cardiomyopathy, cardiac valve disease and history of cardiac surgery).

## **References**

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## **Section S3 Detailed description of self-questionnaires used**

- The Beck Depression Inventory (reduced to 13 items) was used to investigate the presence of depressive symptoms. The 13 items of this scale may be

scored from 0 to 3, which mean that the total score may vary from 0 to 39. A final score of 0-4 indicates an absence of depressive symptoms, 5-7 mild depressive symptoms, 8-15 moderate depressive symptoms, and  $\geq 16$  severe depressive symptoms [59].

- The Epworth Sleepiness Scale was used to investigate daytime sleepiness. The 8 items of this scale assessing sleepiness in different daytime situations may be scored from 0 to 3, which mean that the total score may vary from 0 to 24. A final score greater than 10 indicates excessive daytime sleepiness [60].
- The Insomnia Severity Index was used to investigate the severity of insomnia complaints. The 7 items of this index may be scored from 0 to 4, which mean that the total score may vary from 0 to 28. A final score of 0-7 indicates an absence of insomnia complaints, 8-14 subclinical insomnia complaints, 15-21 moderate insomnia complaints, and 22-28 severe insomnia complaints [61].

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#### **Section S4**Description of the stay conditions at the Sleep Laboratory

The patients went to bed between 22:00 - 24:00 and got up between 6:00 - 8:00, following their usual schedule. During bedtime hours, the subjects were recumbent and the lights were turned off. Daytime naps were not permitted.

#### **Description of the applied polysomnography-montage**

- Two electro-oculogram channels
- Three electroencephalogram channels (Fz-Ax, Cz-Ax and Oz-Ax, where Ax was a A1A2 mastoid reference)
- One submental electromyogram channel
- Electrocardiogram
- Pressure cannula to detect the oro-nasal airflow
- Finger pulse-oximetry
- Microphone to record breathing sounds and snoring
- Plethysmographic inductive belts to measure thoracic and abdominal breathing
- Anterior tibialis electrodes

#### **Section S5**Description of the confounding factors included in the univariate analyses

After a review of the literature on cardiovascular risk factors in apnoeic individuals [62-68], the potential confounding factors included in this study were body mass index (categorised: <25 kg/m<sup>2</sup>, ≥25 & <30 kg/m<sup>2</sup>, ≥30 kg/m<sup>2</sup>), age (categorised: <54 years, ≥54 years), OSAS severity (categorised: mild, moderate, severe), sleep movement disorders (categorised: no, moderate to severe PLMs, RLS alone or combined with PLMs), hypertension (categorised: absent, untreated, controlled, uncontrolled), dyslipidaemia (categorised: absent, without statin therapy, with statin therapy), CRP levels (categorised: <1 mg/L, ≥1 mg/L), depression (categorised: no, remitted, current) and as binary variables: gender, alcohol consumption, smoking, snoring, excessive daytime sleepiness, type 2 diabetes, cardiovascular comorbidities and aspirin therapy.

## **References**

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