Reliability of consumer sleep trackers in patients suffering from obstructive sleep apnea syndrome

NCT 02967367

Document date: January 24, 2020

Study design

In this prospective study, overnight PSG was performed in the sleep laboratory of CHU Saint-Pierre, Brussels in patients being evaluated for OSA. PSG was hooked up by the sleep technologist simultaneously with three other devices: two consumer-level sleep monitors (U and W) and one actigraph (SWA) placed on their non-dominant wrist. The next morning, the same technologist removed the devices and PSG.

Patient selection

From September 2016 to June 2017, 36 adults were prospectively included on a voluntary basis. Subjects were selected based on their medical history and symptoms that led us to suspect OSA. All patients were classified as “at risk” for OSA according to the STOP-BANG questionnaire.

All patients underwent one night of attended-PSG. No special instructions regarding sleep were given in order to guarantee that the recordings would show only “routine” behavior, but in a hospital setting.

Among 36 patients evaluated, 22 were diagnosed with OSA, defined as exhibiting an apnea-hypopnea index (AHI) greater than 15 per hour.