

## **Replacing Polysomnography With Watch\_PAT100 For Sleep Apnea Diagnosis Resulted In Considerable Savings**

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**Introduction:** The Watch-PAT100 is an ambulatory device based on the Peripheral Arterial Tonometry (PAT). It was validated against polysomnography and in a previous laboratory study we have evaluated the clinical guidelines for its clinical use. The aim of this study was to evaluate the savings in full PSG studies in evaluating patients with suspected sleep apnea patients by using the Watch-PAT100.

**Methods:** Watch-PAT100 recordings were performed in 260 consecutive patients (male:female ratio 1:2.6, mean age 51 years old, mean BMI=31, mean ESS=11) referred to our Sleep-Wake disorders center because of suspected sleep apnea syndrome during 2003-2004. The Watch-PAT100 includes pulse oximetry, PAT probe and actigraphy sensors. Data collected during the night were analysed automatically using the Watch-PAT dedicated software package that provided information on Respiratory Disturbance Index (RDI), oxygen desaturation index (ODI), arousal index (ARI) and sleep duration. Final diagnosis and treatment decision were made by a multi disciplinary team based on these results as well as clinical impression.

**Results:** 12 out of the 260 cases were discarded from the study, because of technical difficulties with the PAT probe sensors (N=11), and arrhythmia that interfere with the recordings (N=1). In 28/248 cases the Watch- PAT100 results were inconclusive and a full PSG was needed in order to reach a final diagnosis. In 220 cases, the Watch-PAT100 results were sufficient to establish the a final diagnosis and to decide on the mode of the treatment. Given the facts that a full PSG requires 30-60 minutes of patients preparation before sleep 30 minutes detachment time in the morning and 60 minutes of data scoring and interpretation, using the Watch\_PAT100 will results in a considerable saving of time and costs.

**Conclusion:** The Watch-PAT100 results in 84% reduction in full PSG studies which represents a considerable cost and time saving.

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**POSTER VIEWING** 1:30pm – 3:00pm

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