



Apnea screening using CardioMem[®] CM 4000 & CardioDay[®]

Key challenges

Obstructive Sleep Apnea is associated with many cardiovascular diseases including ischemic heart disease, heart failure, stroke and cardiac arrhythmias. Recent epidemiological studies show that the prevalence of OSA has increased in the past few years¹, with 50% of men and 25% of women within the middle-aged population suffering from moderate to severe of OSA². OSA is responsible for a high number of comorbidities, including cardiovascular disease and sudden cardiac death³.

Solution

The implementation of the CardioDay Holter Analysis system and the CM 4000 multi-channel digital ECG recorder into the diagnostic process made it possible to use standard Holter monitoring records for screening patients with suspected sleep apnea. The CM 4000 uses transthoracic impedance variations to record ECG and respiration at the same time without the need of additional sensors and equipment.

Results/benefits

Today the CardioDay system is actively involved in the diagnostic process. Over 2 years of use, Holter ECG monitoring has been conducted on more than 3,000 patients, of which 389 studies were performed using the CM 4000 recorder. The implementation of the system has increased the percentage of OSA detected and significantly reduced the time required to analyze a long-term ECG⁴.

“Since the implementation of the CardioDay solution, OSA screening has become easier and more efficient, which allows our patients to quickly return to a normal quality of life and improve their prognosis”

Buziashvili Yu.I. Head of CCD, Academician of the Russian Academy of Sciences, Deputy Director of Research at National Medical Research Center for Cardiovascular Surgery named after A.N. Bakulev

The National Medical Research Center of Cardiovascular Surgery named after A.N. Bakulev was founded in 1956. The center performs more than 3,000 surgical procedures per year and provides care to around 30,000 patients.

The Clinical Diagnostic Department (CCD) offers diagnostic and therapeutic cardiology services to inpatients and outpatients attending the hospital. The NMRC named after A.N. Bakulev is recognized as one of the leading cardiovascular surgery related facilities of the Russian Federation.

References

1. Wolk R, Kara T, Somers VK. (2003) Sleep-disordered breathing and cardiovascular disease. *Circulation*, 108(1):9–12.
2. Peppard, P, et al. (2013). Increased Prevalence of Sleep-Disordered Breathing in Adults. *American Journal of Epidemiology*, 177(9), pp.1006-1014.
3. Heinzer, R, et al. (2015). Prevalence of sleep-disordered breathing in the general population: the HypnoLaus study. *The Lancet Respiratory Medicine*, 3(4), pp.310-318.
4. «Скрининг апноэ с использованием CM 4000 и CardioDay» JB72492RU

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