SUMMARY

Prezotti SOA. *Development of a continuous overnight oximetry monitor for the diagnosis of obstructive sleep apnea in the coronary care unit* [thesis]. São Paulo: Faculdade de Medicina, Universidade de São Paulo; 2004.

BACKGROND: A high prevalence of Obstructive sleep apnea (OSA) has been reported in patients with coronary artery disease (CAD). Several OSA related mechanisms, such as oxygen desaturation, high sympathetic activity, increased cardiac oxygen demand and a prothrombotic state, may be particularly dangerous in acute CAD patients. Nevertheless, OSA is frequently underdiagnosed and patients with CAD are not routinely screened for OSA when admitted to the Coronary Care Unit (CCU). OBJECTIVES: To build and validate a continuous overnight oximetry, by recording oximetry data derived from the CCU monitor, for the detection of OSA in acute CAD patients. DESIGN: We studied consecutive patients recruited on the basis of the presence of acute CAD requiring CCU, analyzed overnight continuous oximetry data and further compared it with full overnight polysomnography (PSG). RESULTS: Thirty-seven patients underwent overnight oxygen saturation monitoring in the CCU and 20 of these patients were submitted to PSG, performed within 3 months after hospital discharge. OSA was present in 43% and 45% of the patients studied by overnight oxygen saturation monitoring and PSG, respectively. The oxymetry derived oxygen desaturation index and the PSG derived apnea hypopnea index were strongly correlated ($r = 0,737$; $p < 0,0001$). There was a good level of agreement between abnormal oxymetric results and abnormal PSG results (*kappa* = 0.898; $p < 0,0001$). Overnight oximetry had a sensitivity of 88.9% and a specificity of 100% for OSA diagnosis. CONCLUSIONS: Continuous overnight oximetry derived from monitors that are already present in the CCU is a simple and accurate method for the diagnosis of OSA in the CCU.

KEY WORDS: Obstructive sleep apnea, Oximetry, Coronary disease.