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Utility of ApneaLink for the diagnosis of sleep apnea-hypopnea syndrome.

Nigro CA[1], Serrano F, Aimaretti S, González S, Codinardo C, Rhodius E.
Author information

Abstract

Portable sleep studies may play an important role to take decisions on patients referred for suspicion of Sleep Apnea-Hypopnea Syndrome (SAHS). The aim of this study was to evaluate the diagnostic accuracy of automated analysis of ApneaLink in patients with suspicion of SAHS. All participants (75) performed the ApneaLink and polysomnography (PSG) simultaneously in the sleep laboratory. The two recordings were interpreted blindly. The ApneaLink software calculated: (1) risk indicator (RI)-a combination of apnea/hypopnea index (AHI) plus inspiratory flow limitation events and (2) the AHI. ApneaLink and SAHS were defined in three ways: AHI or respiratory disturbance index (RDI) >or= 5, 10 and 15 respectively. ROC curves analysis was performed. The sensitivity (S), specificity (E) and positive and negative likelihood ratio (LR+, LR-) for the different thresholds for RI or AHI were calculated; 66 patients were included (47 men, mean age 51, median RDI 10.6, mean BMI 29.3 kg/m2). The best cut off points of RI were: SAHS = RDI >or= 5: RI > 9 (S 80%, E 100%, LR- 0.20); SAHS =RDI >or= 10: RI > 13 (S 92%, E 93%, LR+ 13.7 LR- 0.089); SAHS = RDI >or= 15 =: RI > 16 (S 93.5%, E 91%, LR+10.9, LR- 0.071). The AHI had a similar diagnostic accuracy to RI for the different definitions of SAHS. The RI and AHI obtained from automated analysis of ApneaLink were highly sensitive and specific to diagnose moderate to severe SAHS.

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