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Title: Very early screening of sleep-disordered breathing in acute coronary syndrome patients with preserved ventricular function

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Body: Introduction Obstructive sleep apnea(OSA)is highly associated with acute coronary syndrome(ACS).This is the first study performing a very early screening of sleep-disordered breathing(SDB)in ACS patients with preserved ventricular function,using attended polygraphy(PV) and polysomnography(PSG),and comparing those methods. Methods 27patients admitted forACS to the coronary care unit(CCU)were included.They underwent 1overnight attended sleep study at theCCU,within3days.A telemonitoring system was set up to remotely watch the recordings.Than,they were analysed in2different ways: PV&PSG. Results There were81%men with a left ventricular ejection fraction of48%.PSG/PV delay was2±1days and67%within48h.We found a high prevalence of SDB,mainly central and periodic breathing.

Sleep Characteristics

N = 27	PSG Analysis Mean±SD or n (%)	PV Analysis Mean±SD or n (%)
AHI (/h)	42±29	22±15
AHI≥15 (/h)	22 (82)	17 (63)
Central pattern & Periodic Breathing	18	13
Obstructive Pattern	3	3
Mixt Pattern	1	1
Total sleep time (min)	340±137	
Sleep Efficiency (%)	56±20	
Sleep latency (min)	161±100	

N1 (%/TST)	8±7	
N2 (%/TST)	48±21	
N3 (%/TST)	31±20	
REM sleep (%/TST)	12±6	

The telemonitoring system allowed successful interventions in48%of the recordings(80%for the nasal canula and 20%for the ground electrodes or oxymetry). Conclusion A very early screening of SDB,using attended PSG at the CCU is achievable.PSG exhibits a poor sleep efficiency in the majority of patients and allows a more precise evaluation of SDB severity.Surprisingly,in those patients with preserved ventricular function,we found a high prevalence of central apnea and periodic breathing.This results need to be more deeply investigated.