



Case Report

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Obstructive Sleep Apnea Causing Chest Pain and Cardiac Arrhythmias

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Introduction

Chest pain is one of the most common complaints for patients presenting to the hospital. It can be a manifestation of coronary artery disease, acid peptic disease, pleuritis, or musculoskeletal problems. Patients with obstructive sleep apnea may present with chest pain and heart block but lack typical features such as day-time sleepiness, poor concentration, fatigue, and restlessness. Obstructive sleep apnea can cause these problems due to episodes of transient nocturnal hypoxia.

Patient report

A 44 year-old gentleman with hypertension and obesity, presented with episodic chest pain, lasting from a few minutes to hours, mostly at night time for the last 3-4 weeks. His body mass index (BMI) was more than 50. His EKG showed third degree heart block. He was admitted to telemetry for further management. During his hospital stay, he had intermittent chest pain while his cardiac enzymes remained negative. Echocardiography showed mild left ventricular hypertrophy with a normal ejection fraction. A stress test was negative for any coronary pathology. Obstructive sleep apnea was confirmed on polysomnography. The patient was started on positive airway pressure and closely monitored as out-patient. His symptoms improved significantly within days after the start of therapy. He was further advised to lose weight aggressively by behavior modification and was scheduled for bariatric surgery.

Discussion

Although most patients with obstructive sleep apnea (OSA) present with typical features like snoring, day-time sleepiness, fatigue, and restlessness but they can present with chest pain or cardiac arrhythmias only. The prevalence of obstructive sleep apnea in the general population is 20 percent if defined as an apnea hypopnea index greater than five events per hour (the apnea hypopnea index is the number of apneas and hypopneas per hour of sleep). The most important risk factors for obstructive sleep apnea are obesity, craniofacial abnormalities, and upper airway abnormalities. The effect of obesity may be due to both mechanical mass and biochemical mediators. Patients usually have BMI>30, high blood pressure, and large neck and/or waist circumference. For diagnosis, full night or split night attended, in-laboratory polysomnography is recommended. Once proven, behavior modification, weight loss, and positive pressure ventilation are the mainstays of treatment.

Conclusion

In obese patients (BMI>30) who present with chest pain and cardiac arrhythmias, obstructive sleep apnea should be considered as a possible etiology after common causes are excluded. Polysomnography is the “gold standard” for the diagnosis of obstructive sleep apnea and should be considered in obese patients who present with cardiac arrhythmias, even in the absence of common symptoms.

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