Case study

The hidden role of OSA

When hypertension treatment isn't enough

Case Study

Patient overview

Demographics: Male, age 56

Health overview: Hypertension, body mass index (BMI) of 27

Presenting issues: Blood pressure uncontrolled despite use of multiple anti-hypertensive agents

Initial presentation

Thomas,* a 56-year-old male, presented to his primary care provider (PCP) with long-standing hypertension. Over time, he had been prescribed three different anti-hypertensive medications. Despite adherence to his treatment plan and a generally healthy lifestyle, his blood pressure remained difficult to control.

In addition to elevated readings, Thomas reported experiencing fatigue in the afternoons, which he attributed to job stress. He reported no waking episodes during the night and was unaware of any disruptions in his sleep quality.

*Name has been changed to protect patient confidentiality.

Turning point: a missed clue

Thomas lived alone, which made it less likely that a bed partner could notice signs of disordered breathing, such as gasping or choking during sleep. However, during a trip with family members, someone casually mentioned that he was a snorer. That small detail, combined with ongoing difficulty managing his hypertension, led his PCP to refer him to a sleep specialist.

Sleep study findings

The sleep specialist, recognizing the well-established link between resistant hypertension and obstructive sleep apnea (OSA),[1] agreed that further evaluation was warranted. Based on Thomas' clinical profile—including persistent hypertension, witnessed snoring and subtle daytime symptoms—a sleep study was deemed appropriate.

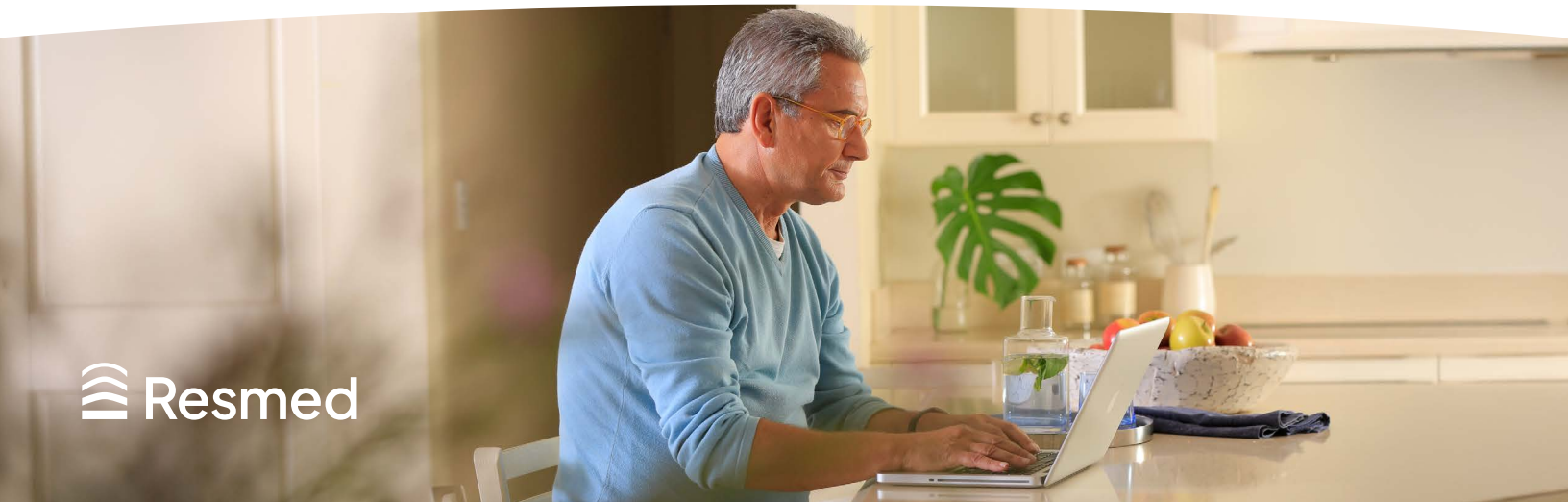
While either a home sleep apnea test (HSAT) or in-lab polysomnography (PSG) could have been clinically justified, the decision was made to pursue an in-lab study due to its more comprehensive assessment capabilities. This approach helped reduce the risk of underestimating the severity of OSA, especially given Thomas' subtle symptoms.

The sleep study revealed:

- **An apnea-hypopnea index (AHI) of 28, clear diagnostic evidence of moderate to severe OSA****
- **Severe oxygen desaturation (SpO_2) during supine sleep, with levels dropping into the high 60s–low 70s**

Although Thomas was initially skeptical of the OSA diagnosis, especially since he didn't consider himself a "typical" candidate, his sleep specialist walked him through the test results using visual data and personalized explanations. These visuals played a key role in helping him understand the impact of untreated OSA on his cardiovascular and cognitive symptoms.

**AHI values of 5–14 indicate mild OSA, 15–30 indicate moderate OSA and values over 30 are classified as severe.



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Treatment and follow-up

Following his diagnosis of moderate to severe OSA, Thomas was scheduled for a positive airway pressure (PAP) titration study to determine the appropriate therapeutic pressure settings needed for effective treatment. This study allowed the care team to tailor his PAP therapy to his specific needs and ensure optimal response from the outset.

After his very first night on PAP therapy, he reported dramatic improvements with increased energy and better mental clarity.

As treatment progressed, Thomas experienced a significant shift in his overall health. He was able to discontinue two of his three anti-hypertensive medications, and the dosage of the remaining medication was reduced. Alongside improved blood pressure control, he saw modest weight loss and noted meaningful improvements in his mental well-being.

Key clinical events and opportunities

Key clinical event	Opportunity area
Blood pressure remained uncontrolled despite adherence to three anti-hypertensive medications	Consider early screening for OSA in patients with treatment-resistant hypertension. Identifying and treating OSA earlier can simplify care, reduce medication burden and improve overall patient outcomes.
Reports of fatigue without clear cause	Recognize subtle daytime symptoms as potential indicators of undiagnosed OSA, even in non-obese or low-risk patients
No self-reported apneas and lack of bed partner to witness apneas	Don't wait for classic signs like gasping or witnessed apnea. Ask about changes in mood, energy or daily functioning
Patient initially skeptical of OSA diagnosis	Use visual data and personalized explanations to support understanding, treatment initiation and adherence

Conclusion

Thomas' case illustrates the importance of looking beyond surface-level symptoms and traditional risk profiles when managing chronic disease. While OSA is often viewed as a comorbidity of conditions such as hypertension, it can also play a significant role in disease progression—one that, when treated, can support better management of other chronic conditions. Recognizing OSA in patients like Thomas is an opportunity to deliver more effective, efficient care and in many cases, to simplify chronic care management and elevate patient quality of life.

Patient journey courtesy of Dr. Audrey Wells

Audrey Wells, MD is a triple board-certified physician in sleep medicine, obesity medicine and pediatrics with over two decades of clinical experience. A nationally recognized expert in sleep health, she specializes in the diagnosis and treatment of obstructive sleep apnea, insomnia, and related disorders across the lifespan.

Dr. Wells is a trusted educator and thought leader, known for translating complex sleep science into practical, actionable strategies for both primary care providers and specialists. Her clinical focus is on delivering effective, sustainable treatment for sleep apnea using an integrative, patient-centered approach that combines evidence-based therapies with personalized care and strategic treatment layering.

[1] Marin JM, Agusti A, Villar I, et al. Association between treated and untreated obstructive sleep apnea and risk of hypertension. JAMA 2012;307:2169–76.

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