A 36 years old lady, presented with history of loud snoring, excessive daytime sleepiness (EDS), nocturnal choking, nocturia, non refreshing sleep and memory lapses for last 7 years. Along with routine spirometry her tidal breath recording (Figure 1) with spirometer (Medgraphics) was performed with the mouth piece held in place while she slept (Figure 2).

What diagnosis does the recording suggest?

The tidal volume recording shows episodic pauses in breathing characteristic of apnoea/hypopnoea seen in obstructive sleep apnea (OSA). She underwent limited polysomnography (PSG) which showed an apnea-hypopnea index of 70/ hour and was diagnosed as a case of severe OSA.

OSA is characterized by repetitive pauses in breathing during sleep, despite the effort to breathe, and is usually associated with reduction in blood oxygen saturation. Common signs of OSA include unexplained EDS, restless sleep or nocturnal choking, and loud snoring. Other symptoms such as morning headache, insomnia, inability to concentrate, mood excessive irritability, anxiety, depression, forgetfulness, decreased sex drive, unexplained weight gain, nocturia and frequent heartburn, may also be seen. Fully attended overnight PSG that involves recording neurogical and cardio respiratory variables at a sleep laboratory has been a gold standard for diagnosis of OSA. Simpler portable diagnostic devices have been developed for unattended home monitoring. Although therapeutic device technology has improved over time, diagnostic sleep testing technology has been relatively stagnant for several years. Availability and cost add to the problems of testing an increasingly recognized disorder. The characteristic tidal breath recording seen in our patient is a simple and interesting way of recording apneas during daytime in cases that fall asleep easily.1

Reference