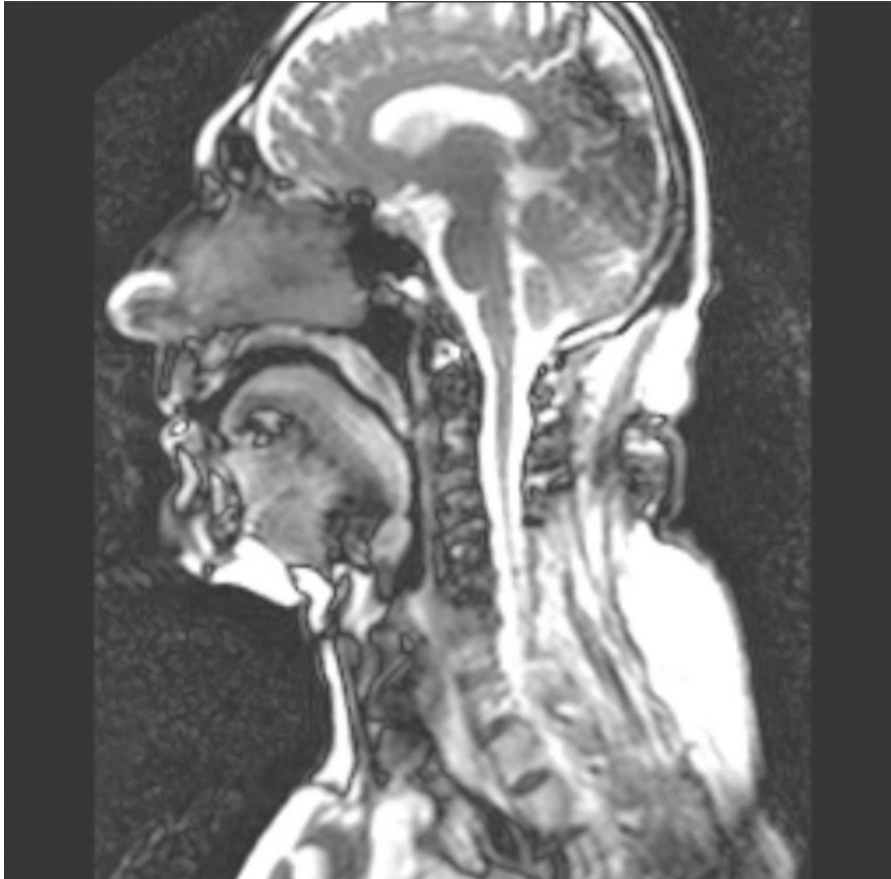


IMAGES IN CLINICAL MEDICINE

Sleep Apnea



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A 61-YEAR-OLD MAN WAS REFERRED TO OUR HOSPITAL FOR EVALUATION OF sleep apnea. He snored loudly and had apnea during sleep. During the day, he was sleepy, and when lying down, he could quickly fall asleep. He had a score of 15 on the Epworth Sleepiness Scale, which ranges from 0 to 24, with a score of more than 10 suggestive of excessive daytime somnolence. On physical examination, there were no abnormalities other than obesity (100 kg [220 lb]; body-mass index [the weight in kilograms divided by the square of the height in meters], 31). Overnight polygraphy revealed a score of 25 events per hour on the apnea–hypopnea index (with a score of 5 to less than 15 indicating mild apnea, a score of 15 to 30 moderate apnea, and a score of more than 30 severe apnea). During dynamic magnetic resonance imaging, captured at 2.7 frames per second, we were able to view changes in the upper airway during a respiratory cycle. The epiglottis moved caudally during inspiration and in a cranial direction during expiration. We observed a 12-second period of total occlusion at the oropharyngeal level, beginning at the end of expiration and ending when the patient, after choking for several seconds, opened his mouth (Video 1). We treated the patient successfully with nasal continuous positive airway pressure, with a pressure of 10 cm of water (Video 2), which reduced his daytime sleepiness and improved alertness.

DOI: 10.1056/NEJMicm1212352

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