

Evidence Discussion

(HD-37.1)

EviCore
By EVERNORTH

- Patient management is rarely impacted by structural brain imaging in the evaluation of unexplained hypersomnolence.¹ Instead, a thorough evaluation can result in an accurate diagnosis while safeguarding patients from unnecessary exposure to radiation and over-reliance on incidental imaging findings as potential contributors to the symptom(s).²⁻³
- The appropriate step in care for patients with disordered sleep is to evaluate their breathing with polysomnography.⁴⁻⁶ Advanced imaging can lead to gaps in care and ineffective treatment of disordered sleep patterns.⁷ Instead, emphasis should be placed on holistic evaluation, including sleep history and sleep testing. Radiography (X-Rays), 3D Advanced Imaging, or dynamic nasopharyngoscopy are not supported by evidence to being superior over polysomnography at this time.⁸

References:

1. Trotti LM, Bliwise DL. Brain MRI findings in patients with idiopathic hypersomnia. *Clin Neurol Neurosurg*. 2017;157:19-21. doi:10.1016/j.clineuro.2017.03.010
2. Lee CH, Ng WY, Hau W, Ho HH, Tai BC, Chan MY, Richards AM, Tan HC. Excessive daytime sleepiness is associated with longer culprit lesion and adverse outcomes in patients with coronary artery disease. *J Clin Sleep Med*. 2013 Dec 15;9(12):1267-72. doi: 10.5664/jcsm.3266. PMID: 24340288; PMCID: PMC3836337.
3. Murray BJ. A Practical Approach to Excessive Daytime Sleepiness: A Focused Review. *Can Respir J*. 2016;2016:4215938. doi: 10.1155/2016/4215938. Epub 2016 May 12. PMID: 27445538; PMCID: PMC4904525.
4. Deak MC, Kirsch DB. Sleep-Disordered Breathing in Neurologic Conditions. *Clinics in Chest Medicine*. 2014;35(3):547-556. doi:10.1016/j.ccm.2014.06.009
5. Yaggi HK, Concato J, Kernan WN, Lichtman JH, Brass LM, Mohsenin V. Obstructive sleep apnea as a risk factor for stroke and death. *N Engl J Med*. 2005 Nov 10;353(19):2034-41. doi: 10.1056/NEJMoa043104. PMID: 16282178.
6. Sahlin C, Sandberg O, Gustafson Y, Bucht G, Carlberg B, Stenlund H, Franklin KA. Obstructive sleep apnea is a risk factor for death in patients with stroke: a 10-year follow-up. *Arch Intern Med*. 2008 Feb 11;168(3):297-301. doi: 10.1001/archinternmed.2007.70. PMID: 18268171.
7. Dunietz GL, Chervin RD, Burke JF, Braley TJ. Obstructive sleep apnea treatment disparities among older adults with neurological disorders. *Sleep Health*. 2020 Aug;6(4):534-540. doi: 10.1016/j.sleh.2020.01.009. Epub 2020 Apr 21. PMID: 32331862; PMCID: PMC7529672.
8. Guarda-Nardini L, Manfredini D, Mion M, Heir G, Marchese-Ragona R. Anatomically Based Outcome Predictors of Treatment for Obstructive Sleep Apnea with Intraoral

Splint Devices: A Systematic Review of Cephalometric Studies. Journal of Clinical Sleep Medicine. 2015;11(11):1327-1334. doi:10.5664/jcsm.5198