Introduction: Hypoglossal nerve stimulation (HGNS) has been available and FDA approved since 2014 in the US and may allow for effective treatment of obstructive sleep apnea (OSA) in patients without concentric collapse on drug-induced sleep endoscopy and other clinical parameters who have failed CPAP. Tolerance of the stimulation parameters may be problematic in a subset of patients not allowing them to adhere to the therapy. Although there are not currently clinically authoritative studies regarding the role of awake endoscopy in management of such patients, visualizing what comfortable settings that allow for effective tongue protrusion while awake potentially allowing for effective treatment of upper airway obstruction in the office setting might serve as a surrogate for ensuring optimization of such treatment during patients' sleep and this is a retrospective review of such patients at Tufts Medical Center in Boston MA.

Methods: A retrospective chart review of patients who were implanted with a HGNS device (Inspire TM) who did not tolerate therapy and proceeded to awake endoscopy to optimize therapy settings that allowed tolerance or comfort of stimulation were analyzed. Patients who had HGNS and awake endoscopy as part of clinical assessment at any time during the course of their clinical evaluations were included in the review.

Results: Out of 129 patients implanted at Tufts Medical Center in Boston, MA, 13 such patients (Approximately 10% of the total number of HGNS implanted patients) proceeded to awake endoscopy to optimize therapy as noted above. A subset of these patients had improved adherence to therapy.
and treatment of OSA with HGNS therapy subsequently to such management.

**Conclusion:** A subset of patients may remain adherent to HGNS therapy after strategically performing awake endoscopy for ensuring comfort and adequacy of tongue protrusion during awake endoscopy in the outpatient setting. This retrospective review indicates that awake endoscopy may optimize tolerance and adherence of HGNS therapy for treatment of OSA in selected patients.

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