

Hypoglossal nerve stimulation in the treatment of OSA

CONCLUSIONS:

Effects on AHI:

Low GRADE

- Hypoglossal nerve stimulation may improve the AHI on short- and long-term in patients with OSA (AHI 15-65).
- Hypoglossal nerve stimulation seems to have a positive effect on the AHI (decrease of at least 50% and an AHI below 20) in a majority of patients.

Sources (Certal, 2015; Strollo, 2016; Woodson, 2016; Woodson, 2014; Heiser, 2016; Kent, 2016; Friedman, 2016)

Effects on oxygen desaturation (ODI):

Low GRADE

- Hypoglossal nerve stimulation may improve the ODI on short- and long-term in patients with OSA (AHI 15-65).

Sources (Certal, 2015; Strollo, 2016; Woodson, 2016; Woodson, 2014; Heiser, 2016; Kent, 2016 (LSAT); Friedman, 2016)

Effects on sleepiness (ESS):

Low GRADE

- Hypoglossal nerve stimulation may improve sleepiness, measured by scoring the ESS, on short- and long-term in patients with OSA (AHI 15-65).

Sources (Certal, 2015; Soose, 2016; Strollo, 2016; Woodson, 2016; Heiser, 2016; Kent, 2016; Friedman, 2016)

Effects on quality of life (FOSQ):

Low GRADE

- Hypoglossal nerve stimulation may improve quality of life, measured by scoring the FOSQ, on short- and long-term in patients with OSA (AHI 15-65).

Sources (Certal, 2015; Soose, 2016; Strollo, 2016; Woodson, 2016; Heiser, 2016; Friedman, 2016 (Sleep Apnea Quality of Life Index)

RECOMMENDATIONS

- Consider hypoglossal nerve stimulation in patients with an AHI between 15 and 65 who have an objectifiable CPAP-intolerance.
- Reconsider the diagnosis in patients with CPAP-failure (insufficient effect on complaints). It is preferable to discuss, in a multidisciplinary board, other treatment options for the patient after polysomnography and DISE.
- Alternative treatment options such as a MAD, a sleep position trainer or upper airway surgery should be evaluated as well.
- Do not apply hypoglossal nerve stimulation in patients if there is a BMI>32, a complete concentric collapse at the level of the velum (at DISE), or more than 25% of central apneas.
- Refer a patient for whom hypoglossal nerve stimulation is considered to a clinic where there is experience with this technique.