

Neuromuscular swallowing training relieves hernia-related dysphagia and GERD symptoms as effectively in obese as in non-obese patients

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Background

Many physicians insist patients lose weight before their hiatal hernia (HH) condition and related symptoms including intermittent esophageal dysphagia (IED) and gastroesophageal reflux disease (GERD) can be treated. Is it true that body mass index (BMI) has an effect on exercise-based treatment of HH-related symptoms?

Study Aims

To investigate whether BMI has significance on IQoro neuromuscular training (IQNT) effectiveness in treating HH-related symptoms.



Image of IQoro, a medical device for Neuromuscular Training (IQNT)

Material and Methods

Subjects

- 86 patients with a:
 - sliding HH
 - persistent reflux symptoms despite treatment with proton pump inhibitors in median 3–6 years
 - intermittent esophageal dysphagia (IED) were consecutively referred for 6 months' IQNT

- The patients were grouped according to their BMI:
 - Group A, normal weight, BMI < 25 (n = 37)
 - Group B, moderately obese, BMI 25–29 (n = 28)
 - Group C, severely obese, BMI 30–37 (n = 21).

Assessments

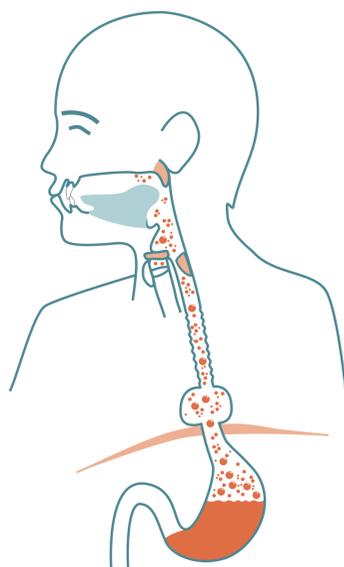
- BMI was recorded before and after IQNT.
- The patients completed a self-assessed questionnaire regarding their symptoms (score 0–3) of reflux, heartburn, chest pain, IED, globus sensation, non-productive cough, hoarseness, and misdirected swallowing.
- The patients were also assessed on their ability to:
 - swallow food on a visual analogue scale (VAS, 0–100)
 - perform a Timed Water-Swallow Test (TWST = SCT, lower normal value 10 mL/s)
 - perform a Pharyngeal Sling Force (PSF-test= LFT; lower normal value \geq 15 N)

Results

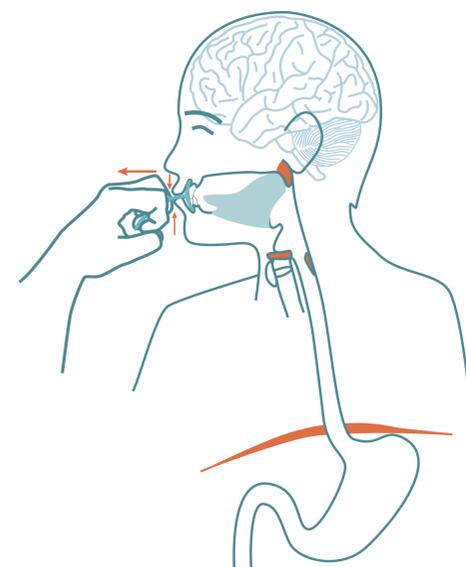
- All BMI groups showed significant improvement ($p < 0.001$) of IED, all GERD symptoms, VAS, TWST and PSF-test after IQoro neuromuscular training.
- There were no significant difference between the BMI groups except for heartburn, cough and misdirected swallowing that were significantly more reduced in Group C (severely obese) than in Group A (normal weight).

Conclusions

- IQNT can treat HH-related IED and GERD symptoms as successfully in moderately or severely obese patients as in those with normal bodyweight.
- BMI has no negative impact on IQNT results in HH-related intermittent esophageal dysphagia (IED) and other GERD symptoms.



Sliding hiatal hernia.



Effect of IQoro training. Recent studies [6,7] using esophageal high-resolution manometry show significant improvement in HH-patients, and significantly increased pressure in the diaphragmatic hiatus after IQoro neuromuscular training (IQNT).

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