Esophageal dysphagia and reflux symptoms before and after oral IQoro training

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Background

GERD and Intermittent Esophageal Dysphagia (IED), and other reflux-based conditions are common:

- 10% to 20% of the worldwide population
- 400 million sufferers worldwide

Untreated, stomach acids can cause:

– Barrett's esophagus and cancer.

Proton Pump Inhibitor (PPI) drugs:

- the most usual treatment

only treat the symptoms, not the underlying cause

Tests employed

- Symptom questionnaire for IED and acid chest symptoms (score 0–3)
- Visual Analogue Scale (VAS) of ability to swallow food (score 0–100)
- Pharyngeal Sling Force (PSF) test (lower normal value \geq 15 N)
- Velopharyngeal Closure Test (VCT) (lower normal value ≥ 10 s)
- Orofacial motor tests
- Oral sensory tests
- High-resolution manometry (HRM) to determine if IQoro traction increased the pressure in the UES and hiatus canal
 - (n = 12 with confirmed HH)

Training regime



- known negative side-effects include:
 - osteoporosis
 - dementia
 - cardiovascular diseases

Study Aims

To examine whether IQoro neuromuscular training improves IED and reflux symptoms.

Material and Methods Patients

(n = 43) consecutively referred with IED of a Chronic non-stenotic character

> Baseline testing Gastroesophageal Radiological assessment for HH

> > Other tests for swallowing difficulties

Group A (n = 21) confirmed Hiatal Hernia Group B (n = 22) no confirmed Histal Hornia

- IQoro neuromuscular training
- 3 pulls of 10 seconds duration
- 3 times per day
- 6 to 8 months' training

Result

Baseline testing

- IED pathological values in 100 %
- Reflux symptoms in 86 %
- orofacial motor and sensory testing ruled out central nervous causes

End-of-training testing

- IED: 98% improved significantly (p < 0.001)
- reflux symptoms: 100% improved significantly (p < 0.001)
- swallowing measured by VAS: 100 % improved significantly (p < 0.001)
- PSF and VCT: improved significantly (p < 0.001)
- PPI medication was discontinued upon entry to the study

HRM testing in the UES and Hiatal canal

- UES: mean pressure increased from 68 mmHg to 95 mmHg (normal resting pressure > 30 mmHg)
- Hiatal canal: mean pressure increased from 0 mmHg to 65

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



Duration

- All had symptoms for median 3 years (range 1–15)
- All had received PPI medication for more than 1 year, but still had reflux.



Training with IQoro 3 times per day, 3x10 seconds.

mmHg (normal resting pressure 10–35 mmHg)

HH confirmed or not by examination

- no difference in test values between groups at baseline
- no difference in improvements between groups

Conclusions

- IQoro is effective at treating IED and GERD
- PPI prescription can be avoided as long-term treatment
- Hiatal hernia is near-exclusively responsible for all reflux-related conditions – whether or not confirmed by examination
- Training should start directly as soon as symptoms are confirmed



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