

HOW DO LAPAROSCOPIC ADJUSTABLE GASTRIC BANDS AFFECT GASTRIC EMPTYING

Burton PR Centre for Obesity Research and Education, Monash University Brown W, Laurie C, Smith A, O'Brien, Royal Melbourne Hospital Hebbard, Yap K, O'donnell M, Kalf M The Alfred Hospital

Background

There is a need for improved understanding of the mechanism of action of laparoscopic adjustable gastric bands (LAGB). The induction of satiety may be associated with modulation of gastric emptying. Nuclear scintigraphy provides poor spatial resolution and has limited the use of this technique.

Methods

A new method that allows compartmental separation and calculation of gastric emptying above and below the LAGB has been developed. 15 successful LAGB patients (EWL >50% and >6 months post surgery) underwent standardised liquid and solid gastric emptying studies with the LAGB at its optimal volume and empty. 20 obese controls and 10 symptomatic patients were studied for comparison. Satiety, reflux and quality of life questionnaires were also utilised.

Results

In successful patients at optimal volume compared to empty there was minimal effect on emptying of liquids above the LAGB. There was a transient delay in emptying of solids. Overall gastric emptying was in the normal range, with very little if any residual activity remaining above the LAGB. Obese controls demonstrated no alterations in gastric emptying. Symptomatic patients demonstrated prolonged stasis above the LAGB, with normal distal gastric emptying.

Conclusions

The LAGB causes a transient delay in the passage of solids rather than liquids into the distal stomach. Overall gastric emptying is unaffected. Symptomatic patients demonstrate prolonged stasis above the LAGB. This new technique allows clinicians to use this functional investigation and provides a baseline for comparison. The satiety signals appear to be generated as a result of transient effects on the proximal gastric pouch rather than the prolonged presence of food.