

Abstract 1309**BEYOND BINARY DIAGNOSIS: UTILISING CHICAGO CLASSIFICATION VERSION 4.0 TO IDENTIFY REFLUX MECHANISMS IN PATIENTS POST GASTRIC BANDING**

Type: Abstract Submission

Topic: AS01 – Surgical Techniques & Outcomes / AS01e – MBS and Reflux: Mechanisms, Treatment, and Surgical Indications

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Background

Chicago Classification Version 4.0 (CCv4.0) represents a paradigm shift by integrating clinical features and anatomical changes into manometric diagnosis. This study utilizes the full CCv4.0 framework to link physiology with clinical management in patients with altered anatomy. Post-obesity surgery oesophageal dysfunction (POSED) and anatomical changes like oesophageal dilation arise from procedure-specific stressors; high-pressure systems like laparoscopic adjustable gastric banding (LAGB) or sleeve gastrectomy exacerbate reflux mechanisms compared to low-pressure bypass. Standard water-swallow protocols are insufficient for predicting tolerance to subsequent surgeries, necessitating expanded assessment of bolus clearance and peristaltic reserve to inform personalized conversion Metabolic Bariatric Surgery (MBS) planning.

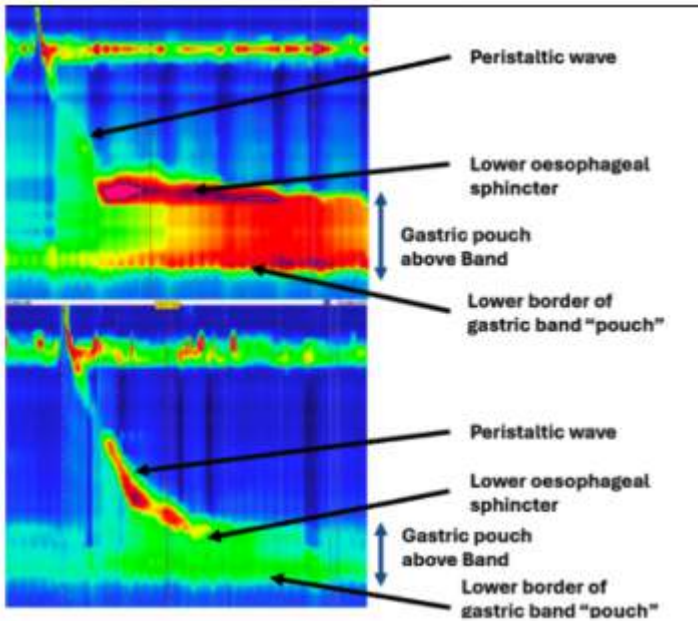
Objectives

To evaluate how the comprehensive application of CCv4.0 identifies physiological mechanisms of reflux post-laparoscopic adjustable gastric banding (LAGB) to guide conversion Metabolic Bariatric Surgery (MBS) indications.

Methods

A retrospective cohort study analysed 49 individuals with obesity post-LAGB using High-Resolution Impedance Manometry (HRIM). Unlike studies focused solely on water-swallow peristaltic patterns, this analysis applied the complete CCv4.0 protocol, incorporating bolus clearance, flow characteristics, and anatomical assessments of the oesophago-gastric junction (OGJ).

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Figure 1: HRIM topography showing mechanism of mechanical outflow obstruction and response to deflation

Results

Standard binary reporting identified dysmotility in 40.8% of the cohort. However, utilizing the full CCv4.0 clinical assessment to account for abnormal post-LAGB anatomy significantly increased the total diagnostic yield to 84.6% in band-in-situ and 39.1% in post-band removal cohorts (p=0.002). This expanded physiological profile directly influenced surgical indications; 38.1% of patients post-band removal changed their planned conversion MBS, with seven individuals opting for Roux-en-Y Gastric Bypass over Laparoscopic Sleeve Gastrectomy due to identified dysmotility mechanisms.

Table 1: Comparison of diagnostic yield using narrow binary metrics vs comprehensive CCv4.0 reporting

Metric	Band-in-situ Cohort (n=26)	Post-band Removal Cohort (n=23)
I. CCv4.0 Abnormality Only	13 (50.00%)	7 (30.43%)
II. Supplementary-only Abnormality	9 (34.62%)	2 (8.70%)
III. Total Diagnostic Yield (I + II)	22 (84.62%)	9 (39.13%)
IV. Normal (No Recorded Abnormality)	4 (15.38%)	14 (60.87%)

Conclusions

In the setting of abnormal anatomy, binary manometric reporting is insufficient. Embracing the full clinical framework of CCv4.0 allows for a nuanced understanding of reflux mechanisms, providing essential objective data to guide personalized conversion MBS planning.

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