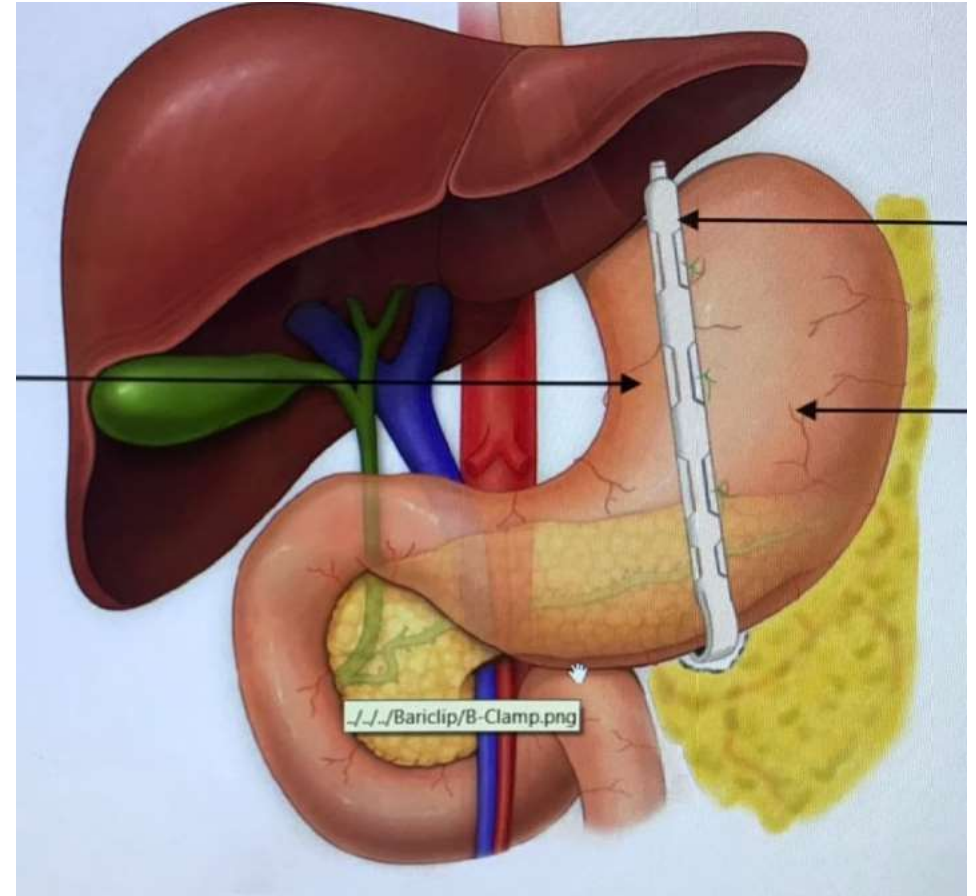


# THE BARICLIP

Patrick Noel, MD, FACS, FASMBS  
Dubai, Qatar, France

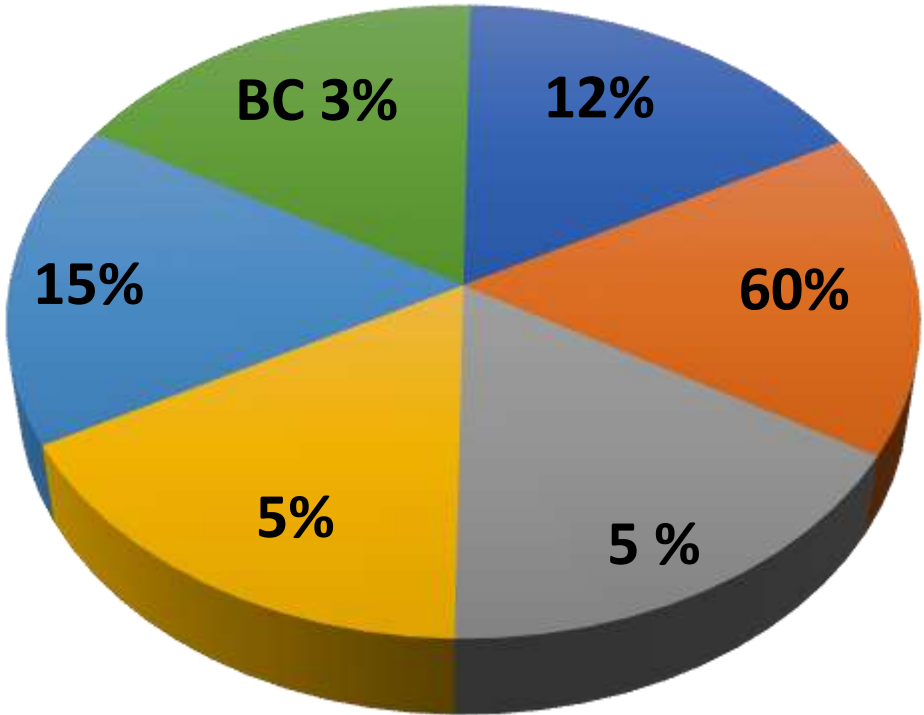


**I have the following potential conflict of interest to report:**

Proctor for **ABT**: Receipt of honoraria



CASE MIX DISCLOSURE



- RYGB
- SG
- OAGB
- DS/SADI-S
- REVISIONAL
- ENDOSCOPIC

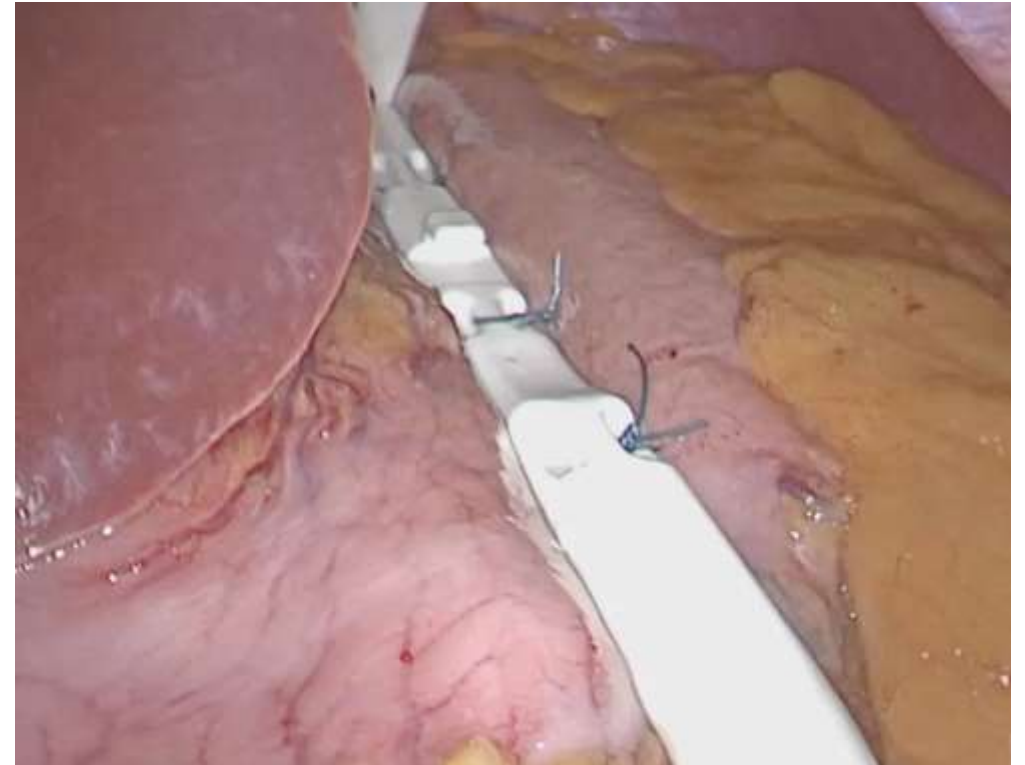
**Please indicate on this Case Mix Disclosure Slide the number of procedures you have performed throughout your whole career.**

**7000 bariatric procedures**



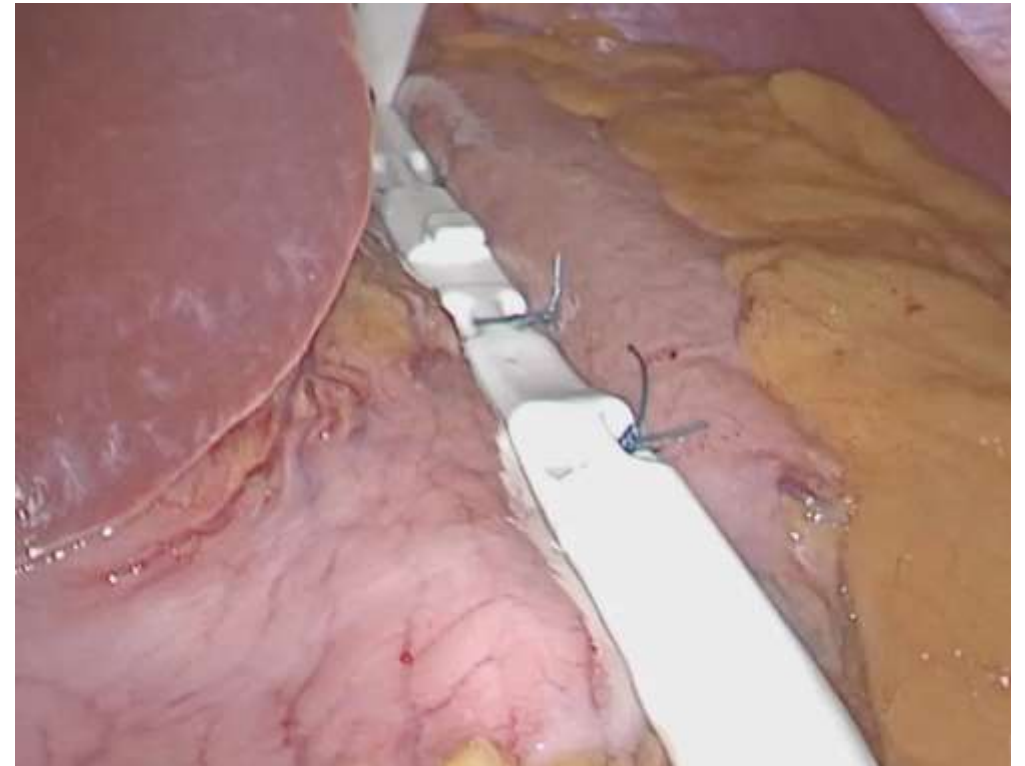
# BARICLIP

- 14,5 cm long titanium clamp covered with silicone placed vertically parallel to lesser curvature, creating a small gastric segment and excluding larger lateral remnant of stomach. Bottom opening for emptying of lateral segment
- « Clipping not cutting» (R Lutfi)
- Restrictive procedure
- Entire stomach accessible by endoscopy
- Reversible

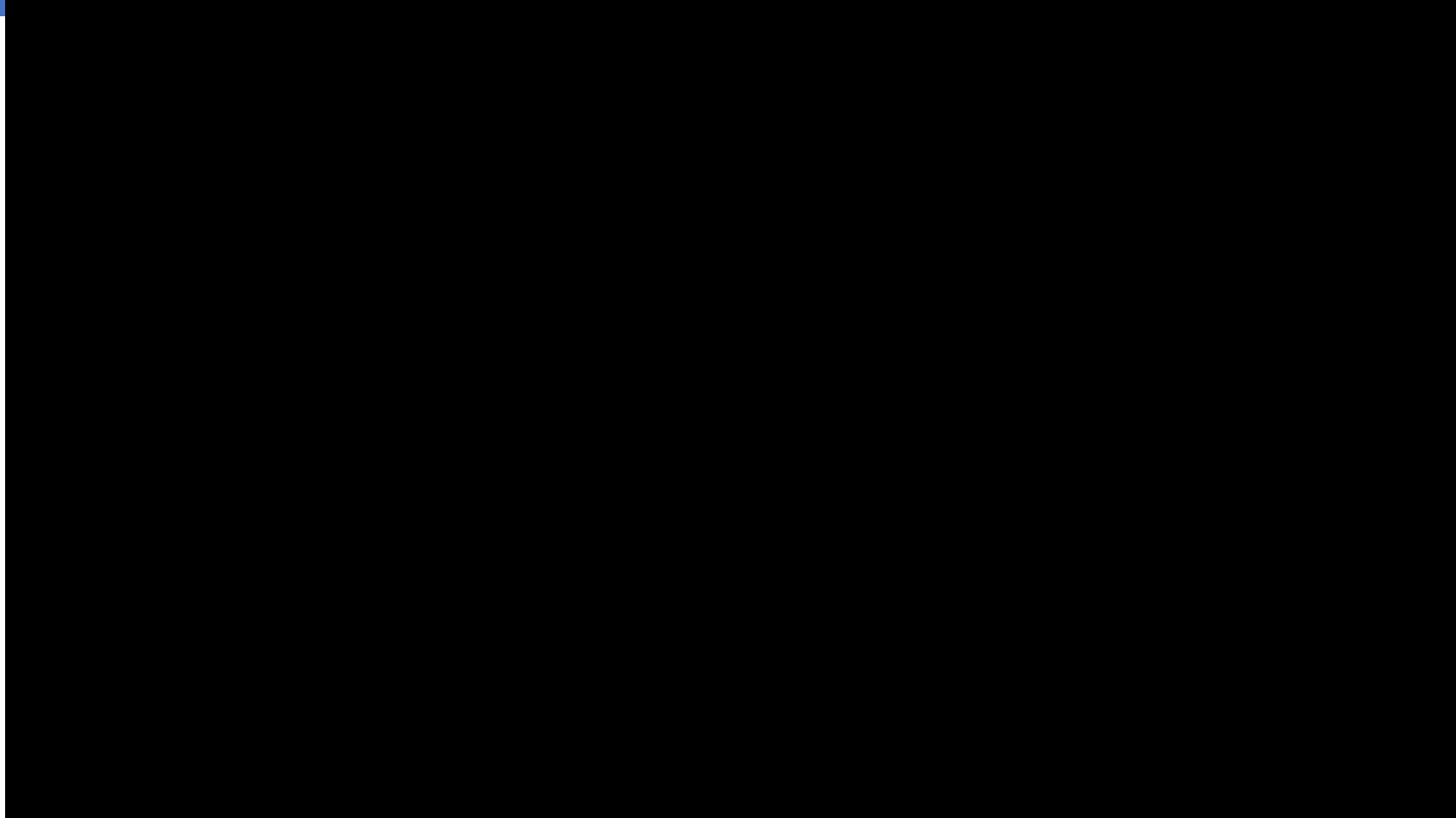


# BARICLIP

- What are the clinical benefits I have seen on my experience ?
- Why is the Bariclip better than the Gastric band ?



# Clinical Study – Technique VIDEO



# Clinical INITIAL Study – WL Results

3 MONTHS				6 MONTHS			12 MONTHS			18 MONTHS			24 MONTHS		
101/107 pts	BMI loss	Weight Loss (Kg)	% EWL	BMI loss	Weight Loss (Kg)	% EWL	BMI loss	Weight Loss (Kg)	% EWL	BMI loss	Weight Loss (Kg)	% EWL	BMI loss	Weight Loss (Kg)	% EWL
min	0.76	3.67	5.71%	1.79	9	15.71%	2.61	10.5	22.83%	5.9	15	29.50%	7.8	20	47.73%
avg	5.83	14.35	31.7%	8.29	20.76	45.06%	9.62	23.83	51.41%	11.06	26.96	58.86%	12.75	32.54	66.73%
max	17.95	27	57.33%	20.67	37	83.04%	22.4	38.36	84.57%	23.27	46.5	89.44%	20.67	56.35	84.21%



NAPOLI

2023

Patrick NOEL, MD, FACS, FASMBS



# Update prospective international series

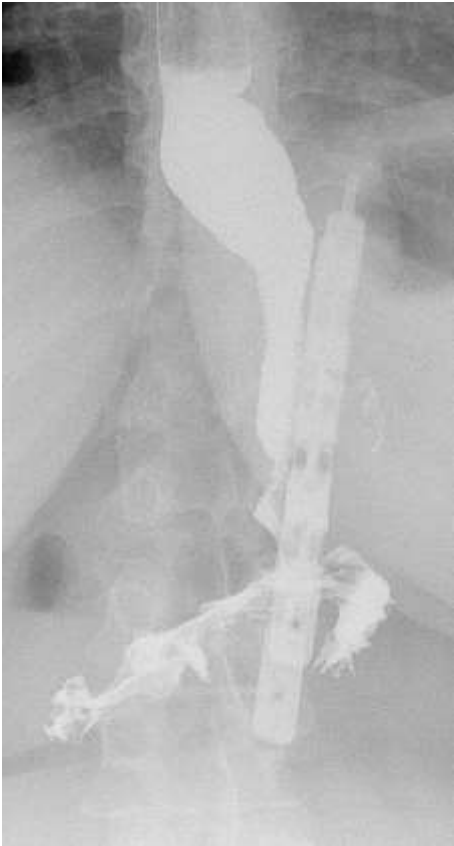
In a prospective international series with one year of follow-up 109 patients have been operated of a BC procedure. At **1** year on 88 patients : mean lost of BMI was **13,08** point, TBL was **21.63%** and EWL **57,30%**.

At 18 months EWL is **63,30%**

**3,40** % of the patients experienced a slippage and **none** erosion. The rate of de novo GERD was low comparatively to a SG (**1.13%**). These preliminary results showed a safety procedure with excellent results at 1 year of follow-up and should be confirmed with other series.

- Dubai, France, Brasil, Panama, Chile, Spain, Peru, Mexico

# Clinical Study – UGI Series Bariclip vs Sleeve



BariClip



Sleeve



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# UGI Series Bariclip / Reconstruction 3D



Courtesy Dr Ashraf Haddad and  
Ahmad Bashir



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# Slippages post Bariclip


Obesity Surgery  
<https://doi.org/10.1007/s11695-023-06780-3>



NEW CONCEPT



## Classification of Slippage Following Laparoscopic BariClip Gastroplasty

Patrick Noel<sup>1,2,3</sup> · Stefano Olmi<sup>4</sup> · Paolo Gentileschi<sup>5</sup> · Robert Caiazza<sup>6</sup> · Camille Marciniak<sup>6</sup> · Diana Gabriela Maldonado Pintado<sup>7</sup> · Gilberto Ungson<sup>8</sup> · Vicente Alarcon<sup>9</sup> · Sergio Carandina<sup>3</sup> · Thierry Manos<sup>2</sup> · John M. Shamoun<sup>10</sup> · Natan Zundel<sup>11</sup> · Rami Edward Lutfi<sup>12</sup> · Jaime Ponce<sup>13</sup> · Marius Nedelcu<sup>2,3</sup> 

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### Abstract

**Introduction** Laparoscopic BariClip gastroplasty (LBCG) is a new reversible gastric sleeve-like procedure without gastrectomy proposed to minimize the risk of severe complications. Still one of the possible complications described with LBCG is slippage. The purpose of the current manuscript is to analyze different cases of slippage and propose a classification of this complication.

**Methods** A number of 381 patients who underwent LBCG in 8 different centers were analyzed concerning the risk of slippage. All cases with documented slippage were carefully reviewed in terms of patients' symptomatology (presence of satiety, vomiting), history of weight loss, radiological data, and management of their slippage. A new classification was proposed depending on the anatomy, the symptomatology, and the time of occurrence.

**Results** We have identified a total of 17 cases (4.46%) of slippage following LBCG. In 11 patients, the slippage was symptomatic with repetitive vomiting and nausea, and in the remaining 6 patients, the slippage was identified by radiological studies for insufficient weight loss, weight regain, or routine radiological follow-up. Depending on the interval time, the slippage was classified as either immediate (in first 7 days) in 6 cases, early (in less than 90 days) in 4 cases, and late (after 3 months) in 7 cases. Evaluation of the radiological studies in these cases identified the following: anterosuperior displacement (type A) in 9 cases, posteroinferior displacement (type B) in 6 cases (one case after 3 months), and lateral displacement (type C) in the remaining 2 cases. The management of the slippage consisted of BariClip removal in 7 cases, repositioning in 5 cases, and conservative treatment in the remaining 5 cases. All patients with conservative treatment were recorded at the beginning of the experience.



# Classification of Slippages following LBCG

Type	Radiology	Patients' symptomatology
I – Immediate ( $< 7$ days)	A – partial anterosuperior  B – posterior inferior	Nausea; vomiting
II – Early (7 – 90 days)		Nausea; vomiting
III – Late ( $\geq 3$ Months)	A – partial anterosuperior  B – posterior inferior  C – lateral displacement	Asymptomatic  Lack of satiety  Weight loss failure

# Classification of Slippages following LBCG



Post Inf



Antero Sup

# SLEEVE, BARICLIP AND GERD: the key point

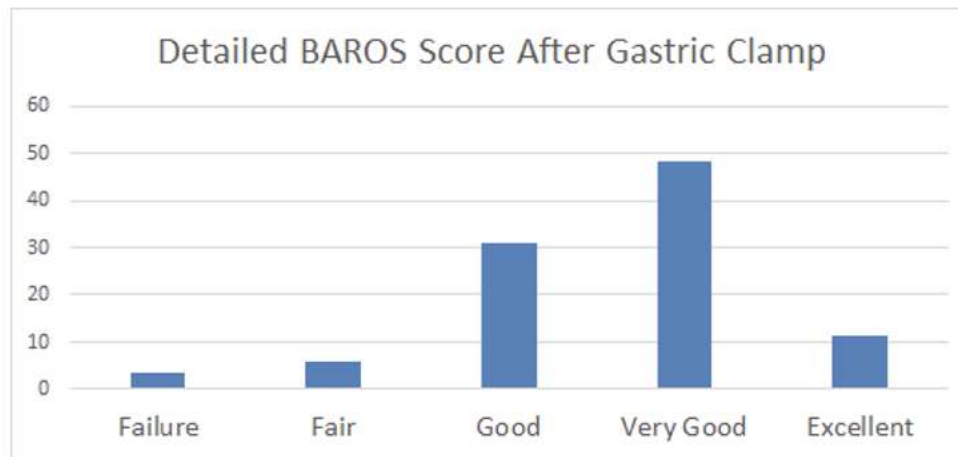
**LSG** IS A **REFLUX MAKER** : HIGH PRESSURE SYSTEM, damaging the ring fibers at OG junction  
GERD de NOVO in **20 to 50%** cases. Development of Barrett's Esophagus in up to **18,8%**

**BARICLIP** IS **NOT REFLUX MAKER** : LOWER PRESSURE SYSTEM by balancing the pressures with the excluded part of the stomach, No damage of the ring fibers, limited dissection of Hiss angle.

GERD de Novo in **1.13%** cases (on 94 cases at 1 year of follow-up)



# CLINICAL STUDY – Quality of Life



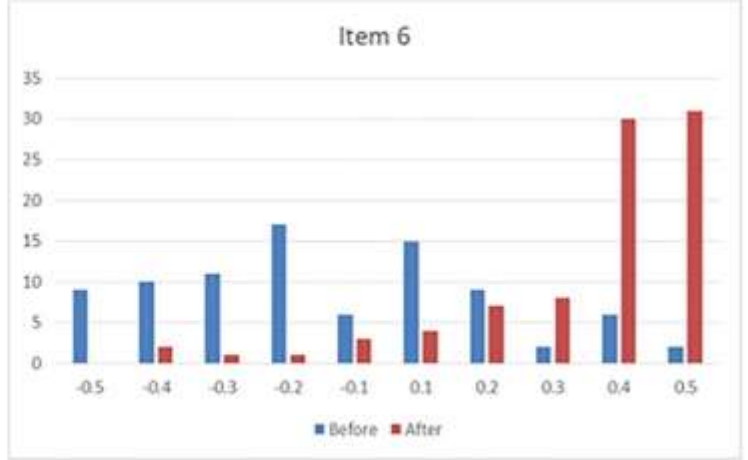
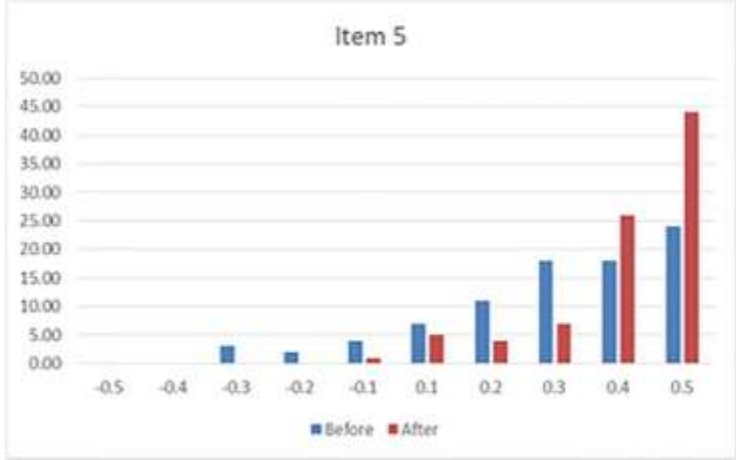
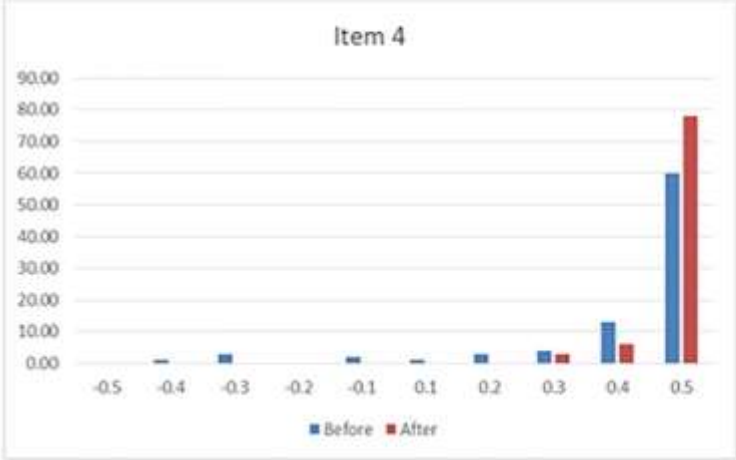
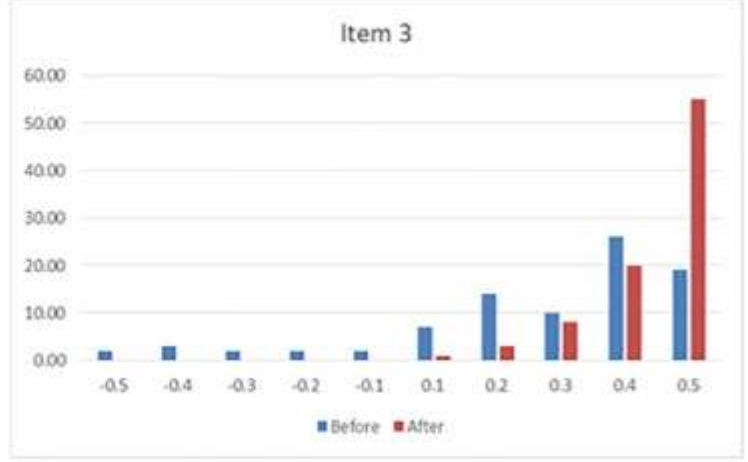
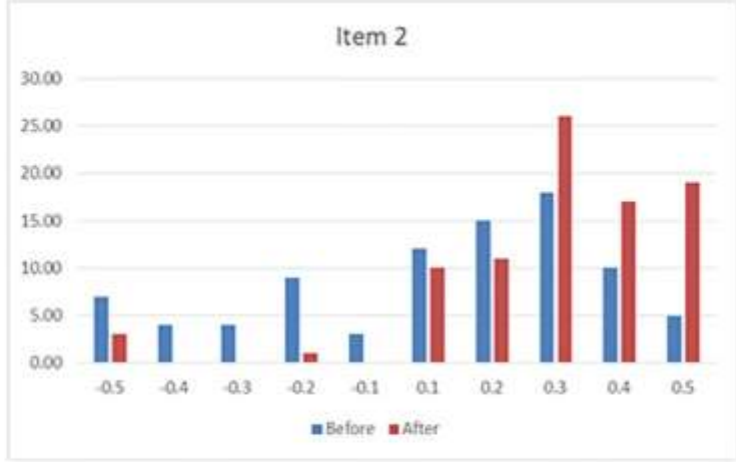
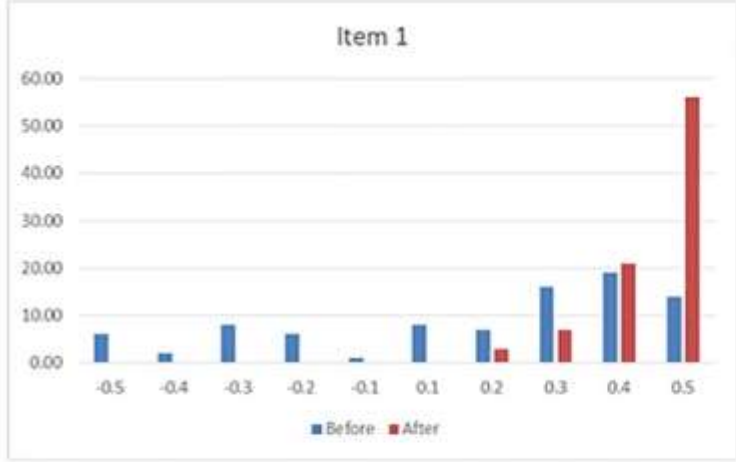
Detailed "After" BAROS (%)	
Failure	3.45
Fair	5.75
Good	31
Very Good	48.3
Excellent	11.5



P Noel, M Nedelcu, I Eddbali, N Zundel (2018). Laparoscopic Vertical Clip Gastroplasty - Quality of Life. SOARD 07/2018







# New technique of BARICLIP

- Technical change with 2 new anterior and 1 posterior suture at the top and the bottom covering the BC : almost no slippages
- Partial antrum plication associated (allowing WL getting closer to the sleeve): no side effects added. No GERD. Weight loss similar to sleeve at 6 months
- We need a longer follow-up to confirm the superiority of this new technique

# The evolved technique OF THE BARICLIP

Obesity Surgery

<https://doi.org/10.1007/s11695-023-06492-8>



ORIGINAL CONTRIBUTIONS



## Evolving Technique of Laparoscopic Vertical Gastric Clip Placement

Patrick Noel<sup>1,2</sup> · Marius Nedelcu<sup>2,3</sup> · Stefano Olmi<sup>4</sup> · Paolo Gentileschi<sup>5</sup> · Robert Caiazzo<sup>6</sup> ·  
Diana Gabriela Maldonado Pintado<sup>7</sup> · Manuel Garcia Garza<sup>8</sup> · Rumbaut Roberto<sup>9</sup> · Abdullenem Abualseel<sup>10</sup> ·  
Caetano Marchesini<sup>11</sup> · Camilo Boza<sup>12</sup> · Gilberto Ungson<sup>13</sup> · Vicente Alarcon<sup>14</sup> · Sergio Carandina<sup>3</sup> ·  
Natan Zundel<sup>15,16</sup> · Jaime Ponce<sup>17</sup> · Rami Edward Lutfi<sup>18</sup>

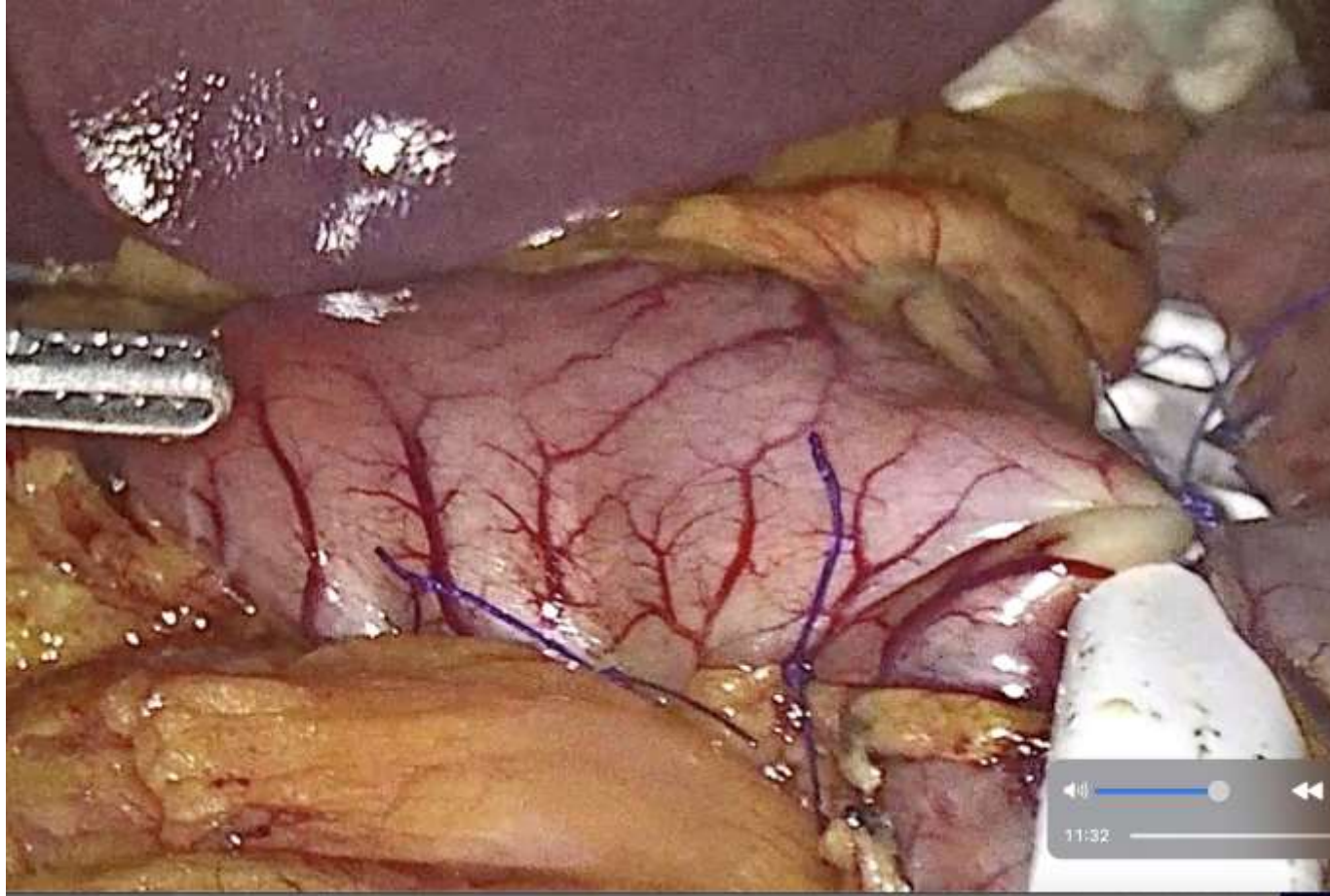


# The evolved technique of The BARICLIP

**Methods** All patients undergoing LBCG with the evolving technique of gastric plication around the device associated with antral gastroplasty from January 2021 to May 2022 were included in the study group (group A). A control group (group B) was designed with patients who underwent previous LBCG technique between May 2017 and June 2019. This is a case-controlled group with patients matched by gender and BMI. We have analyzed the postoperative complications and more notably the slippage.

**Results** One hundred seventy-six patients (44 male and 132 female) with a mean age of 33 years ( $\pm 11$ ) underwent evolving technique of LBCG. A control group of 67 patients who underwent previous technique of LBCG was included. All procedures were completed by laparoscopy with no intraoperative complication. For the study group, we have recorded a number of 5 slippages (2.8%). The diagnosis occurred during the first 6 months after the operation. The management consisted of repositioning—3 cases—and BariClip removal—2 cases. For the control group, we have recorded a number of 3 slippages (4.3%). All three patients underwent BariClip removal, with no repositioning.

# Partial antrum plication associated



# BARICLIP CLINICAL BENEFITS

**WEIGHT LOSS** : Superior to LAGB / Getting closer to the LSG

**UPPER ENDOSCOPY** : Easy

**QUALITY OF LIFE** : Good to excellent for 90 % patients

**GERD** : 1,13 % GERD de Novo: Very low rate for a gastric surgery

**REVERSIBLE** : Easy to remove

**EASY TO CONVERT** to LSG, RYGB, OAGB, SASI Bariclip



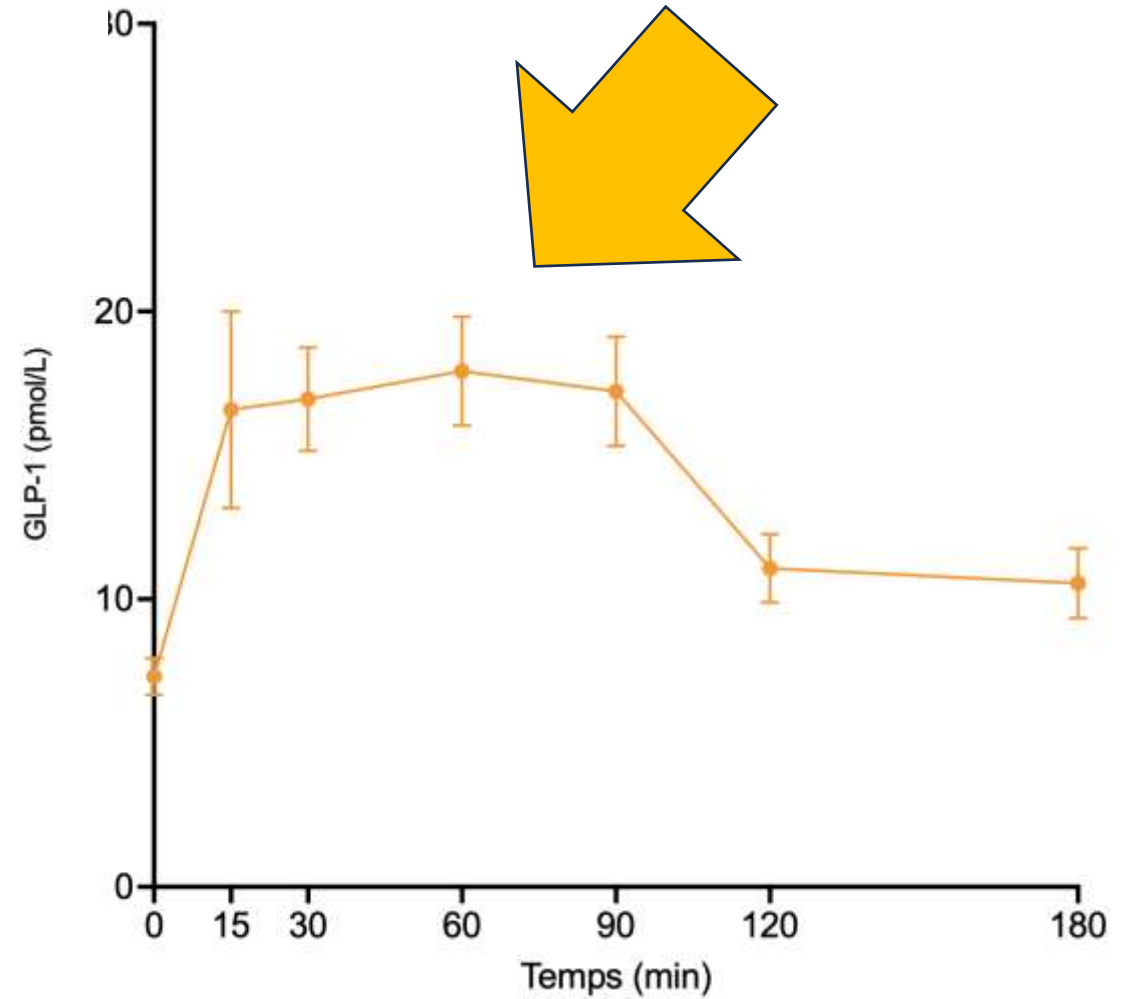
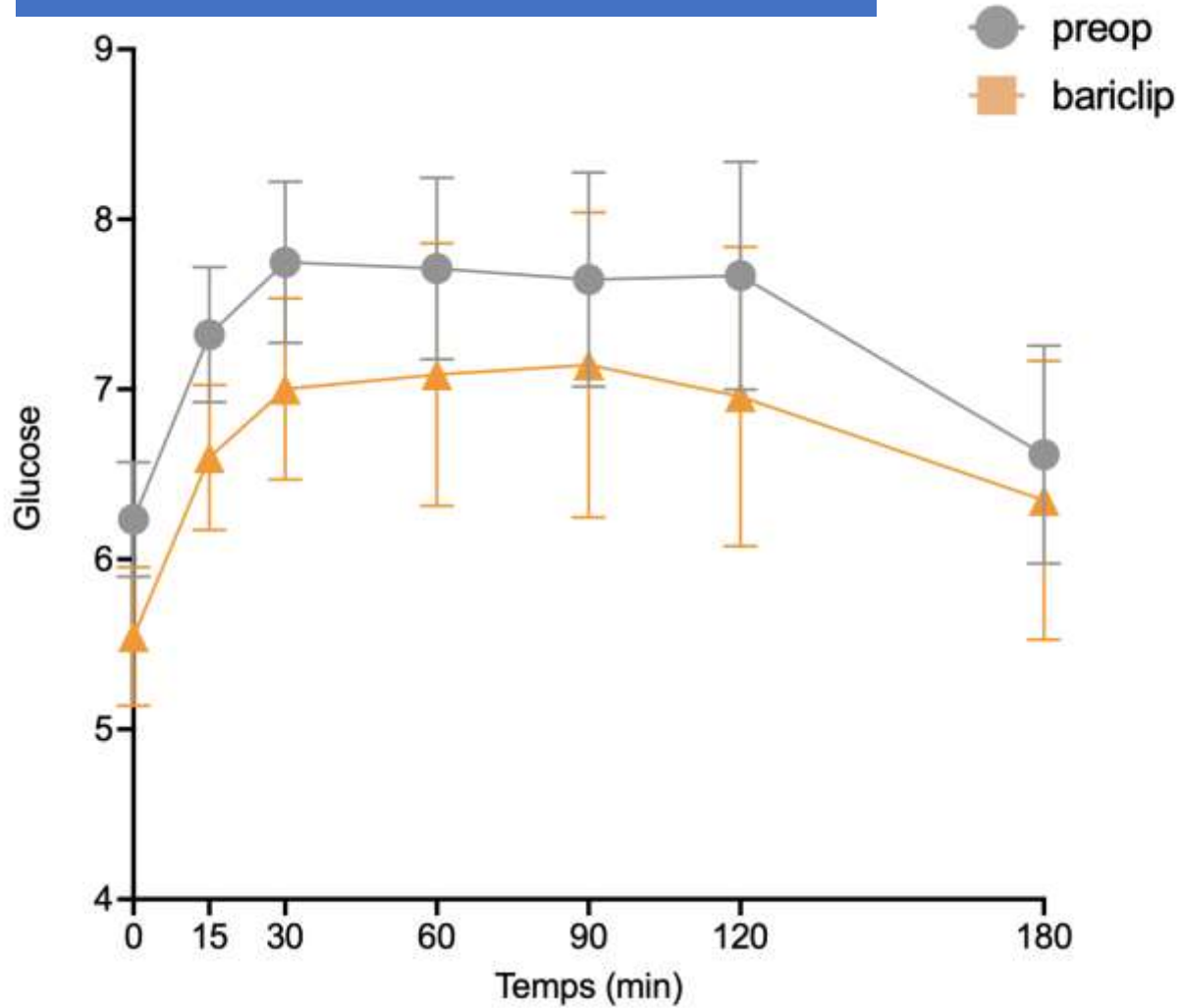
# BIO AND HORMONS / PRELIMINARY RESULTS

- LILLE UNIVERSITY
- 26 patients
- PREOPERATIVE DOSAGES
- FOLLOW UP AT 1 year and 2 years (on process)
- DOSAGES done during STANDARDIZED MIXED MEAL TEST (real meal)

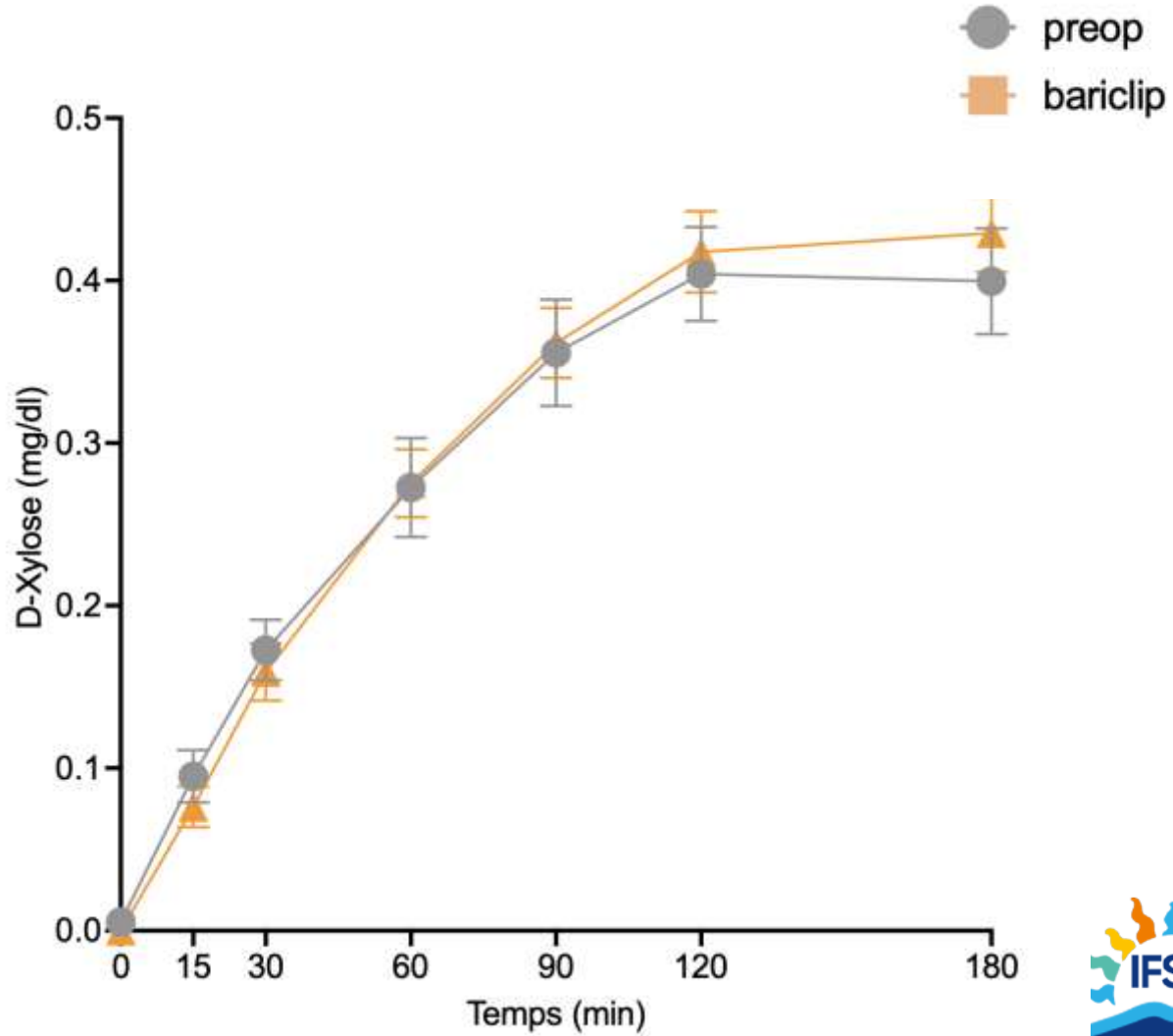


Post prandial Glycemic balance improved at 1 year

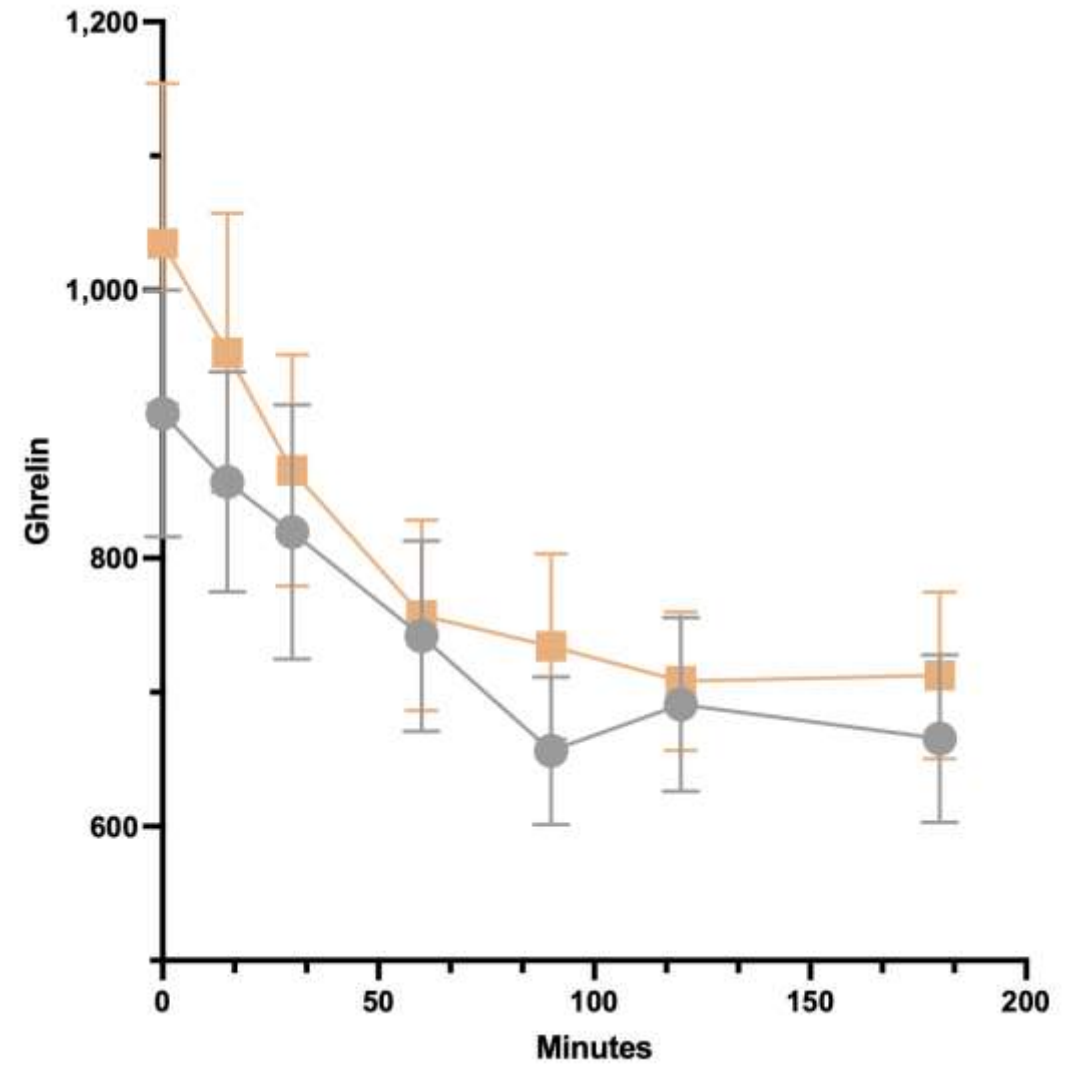
Linked to WL and GLP1 peak  
2 times less LSG – 4 time less GBP

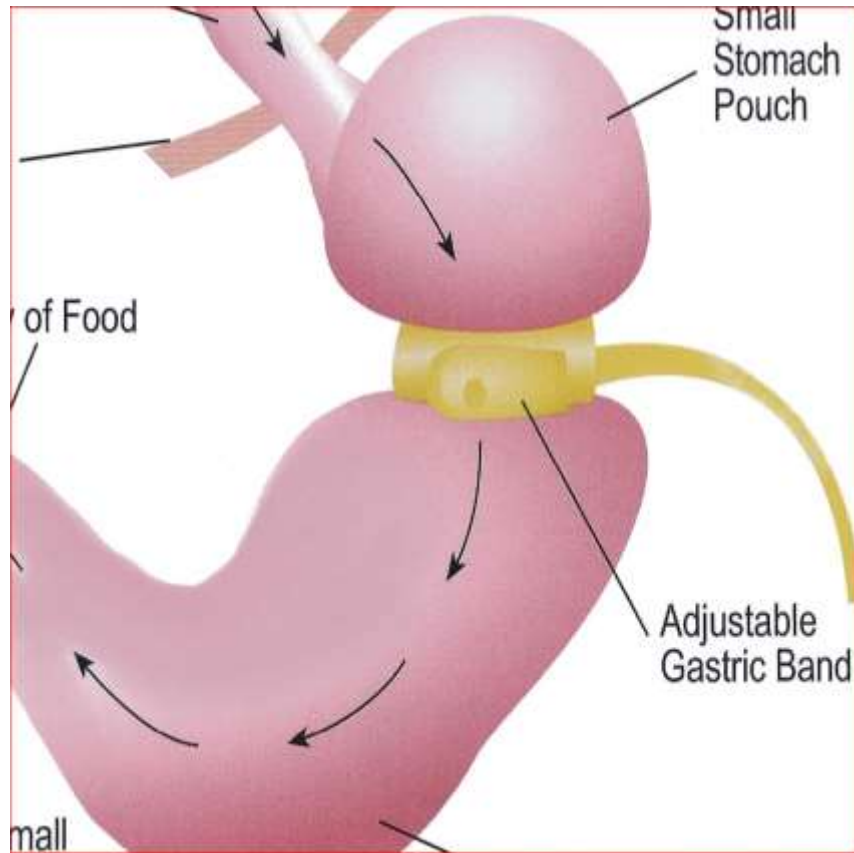


D Xylose metabolized but not absorbed sugar : No change



No change with Ghrelin





LAGB IS OBSTRUCTIVE PROCEDURE

# Gastric banding: history and role

## The history and role of gastric banding

Rudolf Steffen, M.D.

*Department of Surgery, Klinik Beau-Site, Bern, Switzerland*

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Gastric banding has emerged in the development of bariatric surgery as an important therapeutic option for morbidly obese patients. Following the major pioneering milestones of Wilkinson and Peloso, who placed a *nonadjustable* band around the upper part of a patient's stomach in 1978, and Hallberg and Forsell, as well as Kuzmak, who worked on separate continents to develop the clinical application of *adjustable* gastric bands in the early 1980s, banding entered into widespread use in the mid 1990s, when the innovation of the laparoscopic technique made it possible to insert adjustable bands without open surgery. Today, several institutions have reported long-term ( $\geq 5$ -year) results with laparoscopic adjustable gastric banding (LAGB). With a small number of exceptions, LAGB efficacy data range from satisfactory to excellent, with some institutions noting annual reoperation rates in the vicinity of 5%, and quality of life scores using the Bariatric Analysis and Reporting Outcome System in the good-to-excellent range in up to 70% of patients. These outcomes, coupled with the fact that LAGB has the best record of safety among the bariatric operations, is reversible, and can be performed at a relatively low cost, have established LAGB as an important tool in the long-term management of morbid obesity. (Surg Obes Relat Dis 2008;4: S7–S13.) © 2008 American Society for Metabolic and Bariatric Surgery. All rights reserved.

# Laparoscopic adjustable gastric banding, the past, the present and the future

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*Contributions:* (I) Conception and design: N Furbetta, F Furbetta; (II) Administrative support: F Furbetta; (III) Provision of study materials or patients: All authors; (IV) Collection and assembly of data: N Furbetta, R Cervelli; (V) Data analysis and interpretation: All authors; (VI) Manuscript writing: All authors; (VII) Final approval of manuscript: All authors.


*Correspondence to:* Niccolò Furbetta, MD. General Surgery, Department of Surgery, University of Pisa, Via Paradisa 2, Pisa 56124, Italy. Email: n.furbetta@hotmail.it.

**Abstract:** The laparoscopic implantation of an adjustable gastric banding (LAGB) was first described in 1993. Thereafter, the LAGB underwent to a lot of modifications, revision and refinements to become as it is currently defined. This procedure quickly became one of the most common bariatric surgical operations in the world in the first decade of the 2000s but, over the last few years, it has turned into the fourth more common procedure. A series of more or less clear reasons, led to this decrease of LAGB. The knowledge of the history of the LAGB, of its evolution over the years and its limitations can be the key-point to recognize the reasons that are leading to its decline. The adjustability and the absolute reversibility characteristic of LAGB, make this surgical procedure a “bridge treatment” to allow the specific goal of eradicating obesity.



# Long term outcomes LAGB

## Long-Term Outcomes After Bariatric Surgery: a Systematic Review and Meta-analysis of Weight Loss at 10 or More Years for All Bariatric Procedures and a Single-Centre Review of 20-Year Outcomes After Adjustable Gastric Banding

Paul E. O'Brien<sup>1,2</sup>  · Annemarie Hindle<sup>3</sup> · Leah Brennan<sup>3</sup> · Stewart Skinner<sup>1,2</sup> · Paul Burton<sup>1,2</sup> · Andrew Smith<sup>2</sup> · Gary Crosthwaite<sup>2</sup> · Wendy Brown<sup>1,2</sup>

Published online: 6 October 2018  
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### Abstract

**Introduction** Durability is a key requirement for the broad acceptance of bariatric surgery. We report on durability at and beyond 10 years with a systematic review and meta-analysis of all reports providing data at 10 or more years and a single-centre study of laparoscopic adjustable gastric banding (LAGB) with 20 years of follow-up.

**Methods** Systematic review with meta-analysis was performed on all eligible reports containing 10 or more years of follow-up data on weight loss after bariatric surgery. In addition, a prospective cohort study of LAGB patients measuring weight loss and reoperation at up to 20 years is presented.

**Results** Systematic review identified 57 datasets of which 33 were eligible for meta-analysis. Weighted means of the percentage of excess weight loss (%EWL) were calculated for all papers included in the systematic review. Eighteen reports of gastric bypass showed a weighted mean of 56.7%EWL, 17 reports of LAGB showed 45.9%EWL, 9 reports of biliopancreatic bypass +/- duodenal switch showed 74.1%EWL and 2 reports of sleeve gastrectomy showed 58.3%EWL. Meta-analyses of eligible studies demonstrated comparable results. Reoperations were common in all groups. At a single centre, 8378 LAGB patients were followed for up to 20 years with an overall follow-up rate of 54%. No surgical deaths occurred. Weight loss at 20 years ( $N = 35$ ) was 30.1 kg, 48.9%EWL and 22.2% total weight loss (%TWL). Reoperation rate was initially high but reduced markedly with improved band and surgical and aftercare techniques.

**Conclusion** All current procedures are associated with substantial and durable weight loss. More long-term data are needed for one-anastomosis gastric bypass and sleeve gastrectomy. Reoperation is likely to remain common across all procedures.

# Why bariclip is better than band

- Vertical implant, not horizontal or oblique: no fighting with the gastric peristaltism like with the band. Just a division of the gastric tract in a smoothie and smaller functional stomach : purely restrictive surgery
- The consequences of this are the absence of chronic dilation of the esophagus like with the band and the absence of GERD
- Clinically : WL is already superior with the Bariclip at short and mid term
- No reservoir on the side
- No need of adjustment
- Quality of life is better. No vomissement

# Why bariclip is better than band

**Ghrelin** : no change (like with band)

**Pick of GLP1** : no pick with Gastric Band

First Results LILLE University





# Indications in bariatric surgery

- BMI 30-35 : No stapling surgery today. Endoscopic treatment. Drugs ? The **BariClip could cover** this gap in this market (the first in terms of number of patients)
- BMI 35-45 : Stapling procedures first or Bariclip depending of the patient's choice.

## **BariClip best indication:**

- Patients scared with complications following stapling surgery
  - Patients asking for reversibility
  - Young patients = obesity – multistep approach
- BMI over 45 : Stapling surgeries
  - Redo : Stapling surgeries

# BARICLIP

## WORK ON PROCESS

