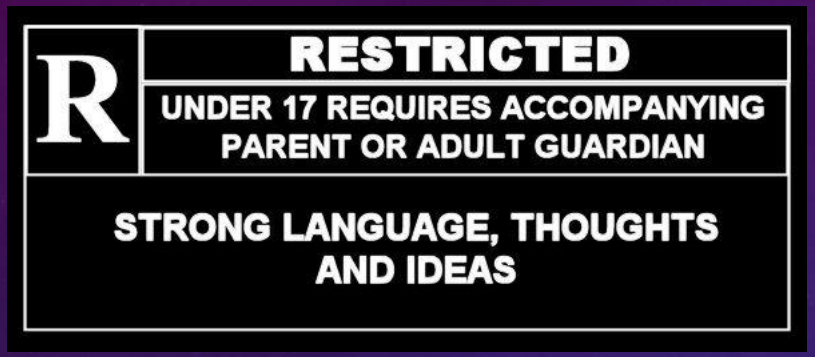
How I changed my limb length throughout the years. What is the evidence?

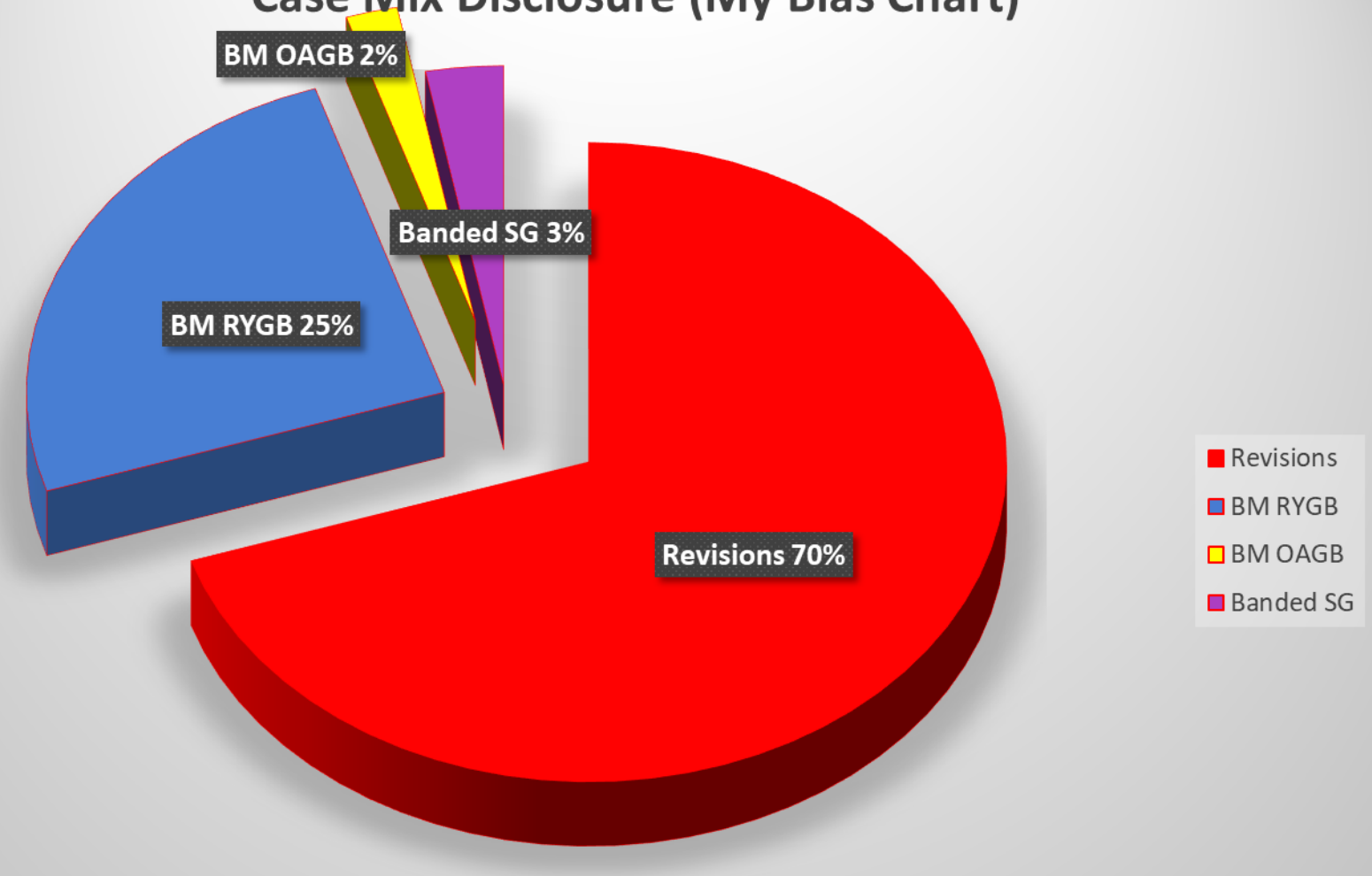
Khaled Gawdat,M.D.
Professor of Surgery
Ain- Shams School of Medicine
President IFSO MENA Chapter
Associate and Advisory Editor Obesity Surgery
Cairo Egypt

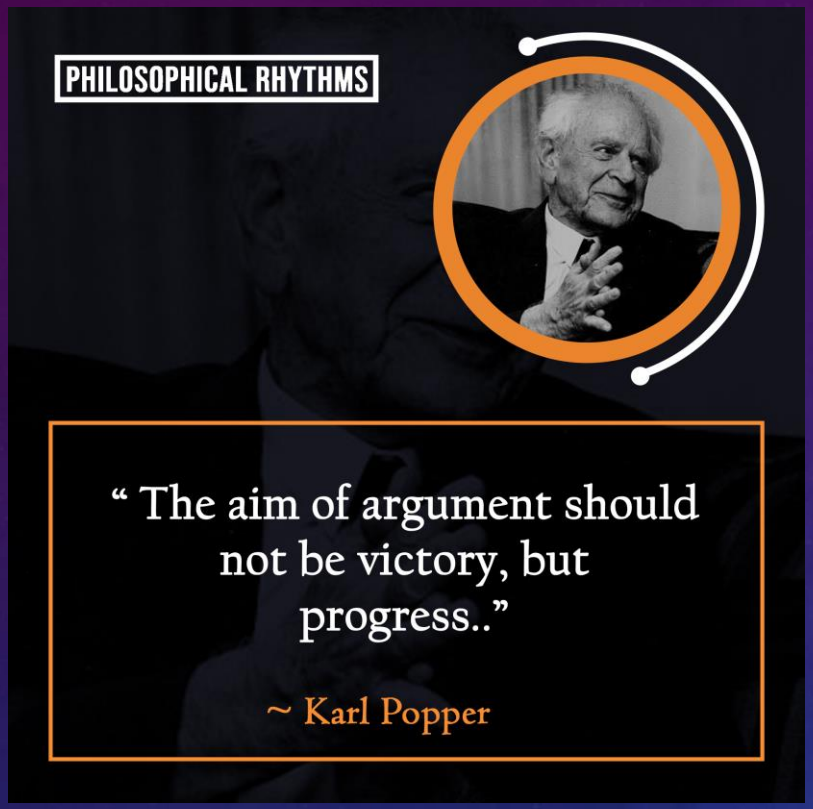


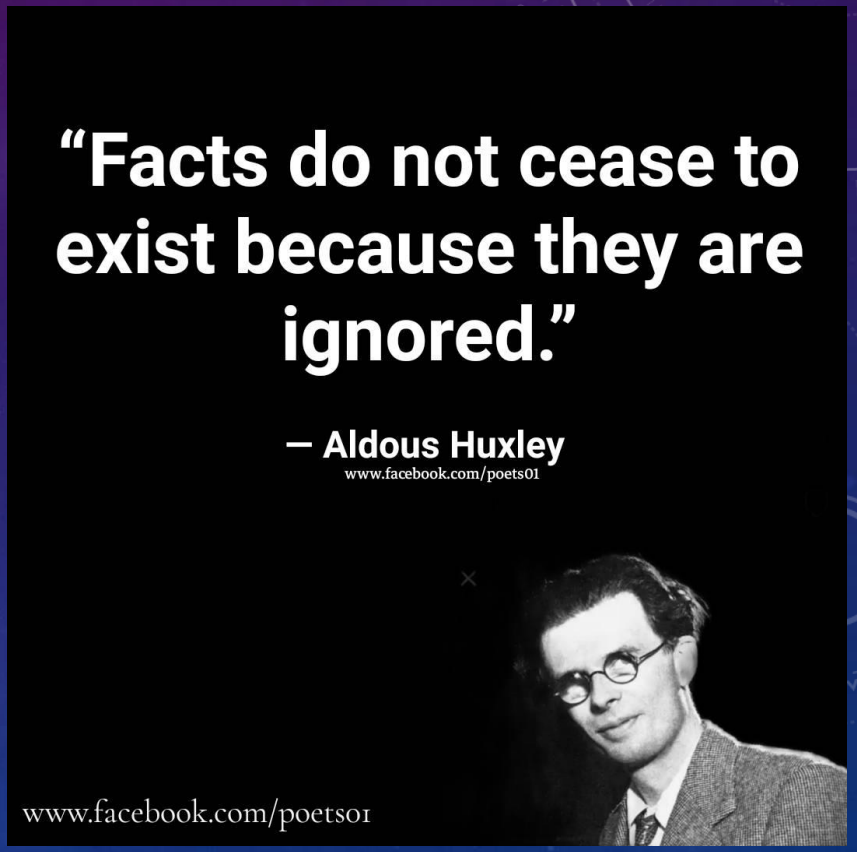
DISCLOSURES

Unfortunately non

Case Mix Disclosure (My Bias Chart)




PHILOSOPHICAL RHYTHMS
" The aim of argument should not be victory, but progress.."
~ Karl Popper


"Facts do not cease to exist because they are ignored."
— Aldous Huxley
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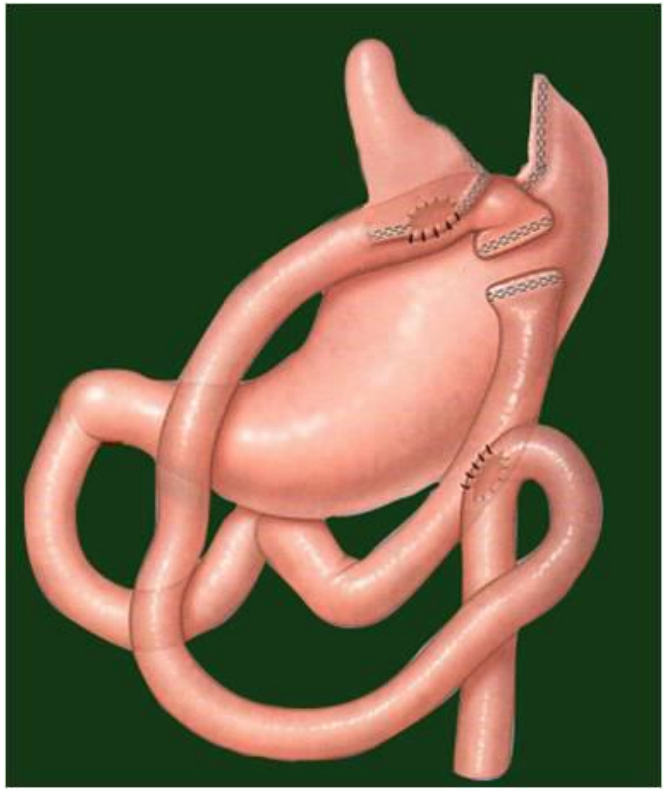
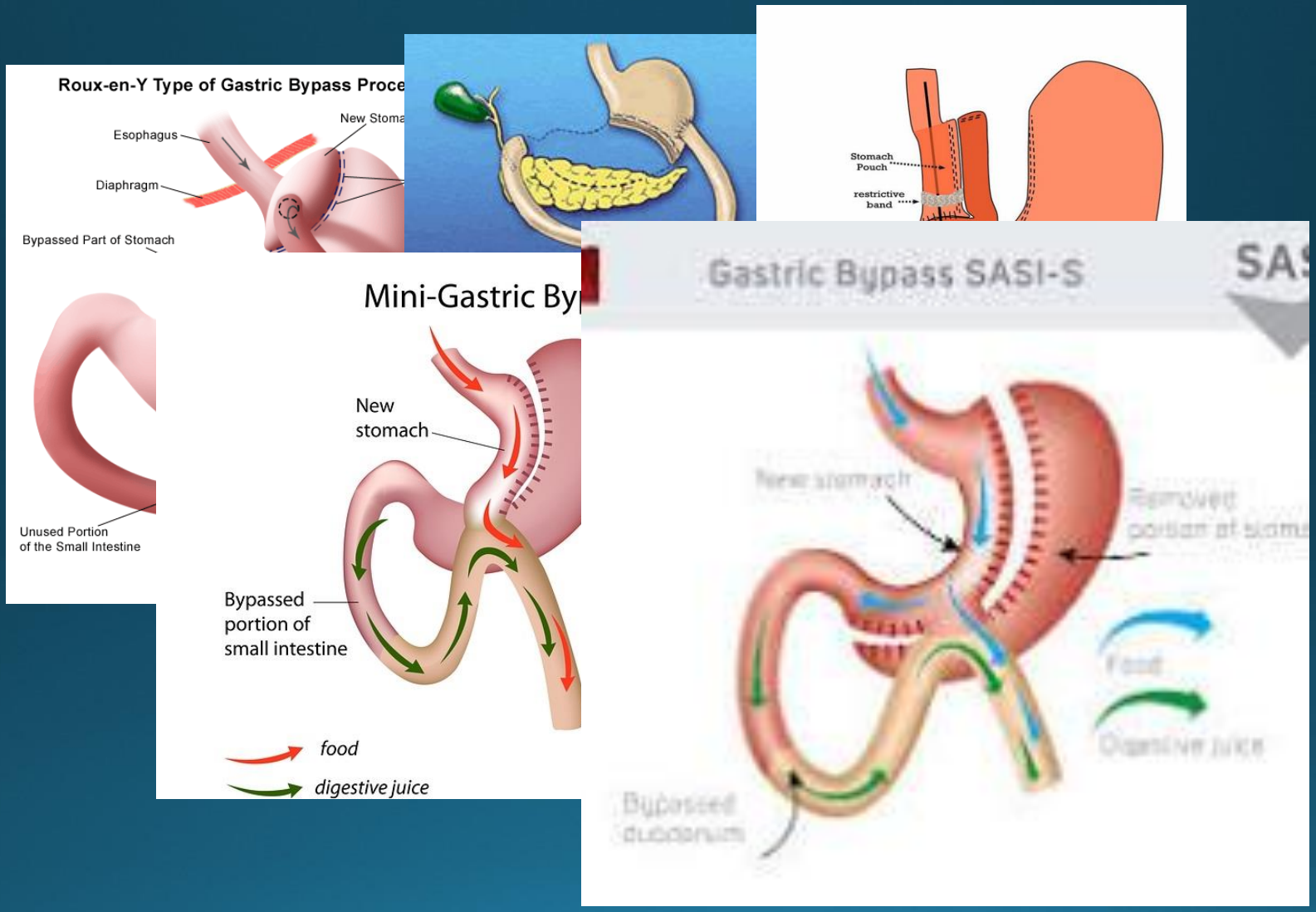
WE DISTORT KNOWLEDGE FURTHER WHEN WE ABSTRACT LAYERS OF COMPLEXITY INTO ONE SIMPLE WORD

Gastric Bypass

Gastric Bypass Variables

- Pouch size
- Pouch Enforcement
- Stoma Size
- Alimentary limb
- Biliopancreatic limb
- Common Channel
- Omega Vs Roux en Y




Roux-en-Y Type of Gastric Bypass Proce
Esophagus
New Stoma
Diaphragm
Bypassed Part of Stomach
Unused Portion
of the Small Intestine
Stomach
Pouch
restrictive
band
Mini-Gastric By
New
stomach
Bypassed
portion of
small intestine
food
digestive juice
Gastric Bypass SASI-S
SAS
New stomach
Food
Digestive juice
Bypassed
duodenum

THE OAGB STORY

- 1993-2000 race to establish lap
  Schauer, Higa, Gagnier, Lonroh
- 1998 Rutledge invented lap
  laparoscopic RYGB, no scie
  commercial reasons
- Published good 6 year out
  communications)
- WJ Lee made a prospective
  that OAGB was better
  improvement
- JM chevalier reported
  shortened that to 150
- Yomega trial in Franc

> Obes Surg. 2005 Oct;15(9):1304-8. doi: 10.1381/096089205774512663.

Continued excellent results with the mini-gastric bypass: six-year study in 2,410 patients

Robert Rutledge [1], Thomas R Walsh

J Minim Access Surg. 2016 Oct-Dec; 12(4): 305–310. PMCID: PMC5022508
doi: 10.4103/0972-9941.181352 PMID: 27251826

Current status of mini-gastric bypass

Kamal K. Mahawar, Parveen Kumar,[1] William RJ Carr, Neil Jennings, Norbert Schroeder, Shlok Balupuri, and Peter K. Small

In their comparative analysis of RYGB and MGB over a 10-year period, Lee *et al.*[3] found that at 5 years, MGB had a significantly lower body mass index (BMI) (27.7 vs 29.2) and higher excess weight loss (EWL) (72.9% vs 60.1%); there was no significant difference in the improvement of comorbidities. A randomized study from the same group[14] showed a lower complication rate with MGB (7.5% vs 20%, $P < 0.05$) and a higher proportion of patients achieving an EWL >50% (95% vs 75%, $P < 0.05$). We have also observed similar results in our practice.

THE LANCET
Diabetes & Endocrinology

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ARTICLES · Volume 12, Issue 4, P267-276, April 2024

Efficacy and safety of one anastomosis gastric bypass versus Roux-en-Y gastric bypass at 5 years (YOMEGA): a prospective, open-label, non-inferiority, randomised extension study

Prof Maud Robert, MD [a,b] · Tigran Poghosyan, MD [c] · Prof Delphine Maucort-Boulch, MD [d,e] · Dr Alexandre Filippello, MD [g] · Prof Robert Caiazzo, MD [h] · Adrien Sterkers, MD [i] · Lita Khamphommala, MD [i] · Prof Fabian Reche, MD [j] · Vincent Malherbe, MD [k] · Adriana Torcivia, MD [l] · Toufic Saber, MD [m] · Dominique Delaunay, PhD [a] · Carole Langlois-Jacques, MSc [d,e] · Augustin Suffisseau, MD [c] · Sylvie Bin, MD [n] · Prof Emmanuel Disse, MD [b,f] · Prof François Pattou, MD [h] Show less

Affiliations & Notes Article Info Linked Articles (1)

Bariatric literature with poor data Quality

Garbage in Garbage out
Low quality data produces low quality statistical analysis low quality meta-analysis and low quality systematic reviews

THE GREATEST OF MANKIND'S CRIMINALS ARE THOSE WHO DELUDE THEMSELVES INTO THINKING THEY HAVE DONE THE RIGHT THING

History of Modern RYGB

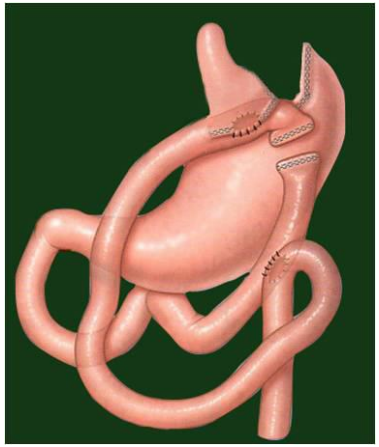
- 1980s
- Good initial results
- Gold standard terminology vs VBG
- 1990s RYGB Failures prompted the search for modifications
- Banded Bypass (Fobi Capella)
- Distal Bypass (Brolin)
- Duodenal switch (Hess, Marceau)
- Laparoscopic (smaller pouch) Bypass

RYGB

- A restrictive bariatric procedure with claimed MalAbsorpive and hormonal effects that is performed with infinite technical combinations and variations, with extremely variable outcomes and it is called the gold standard bariatric procedure by Harvey Sugarman.

Mechanism of Action of the Gastric Bypass Procedures

- **We do not know**
- **Restrictive?**
- **Mal-absorptive?**
- **hormonal elements?**
- **Combination?**
- **Others (bile salts, gut flora, etc)**



What happens to bariatric patients on the long term

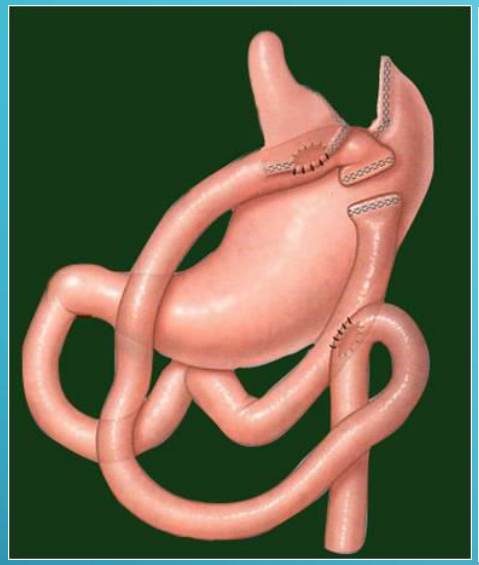
We don’t know

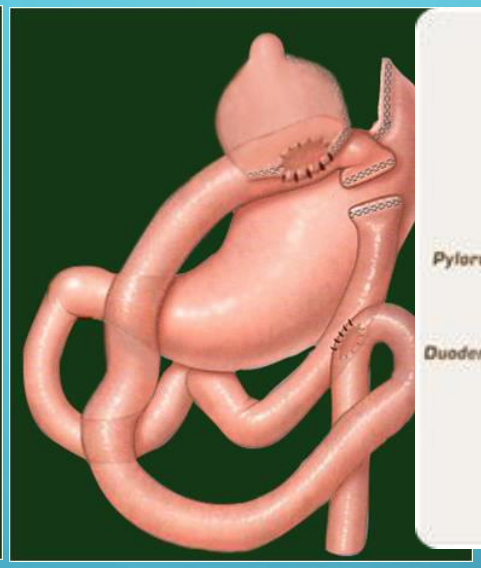
Lack of long term studies

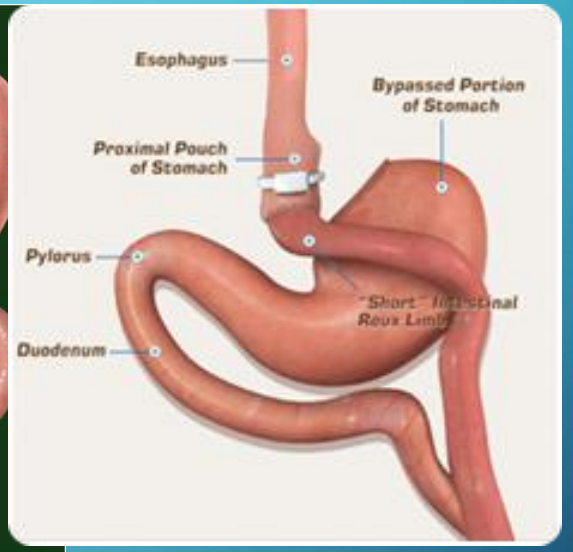
Poor long term follow-up rates

Should we measure preoperative hormones and follow up hormone changes for every body?

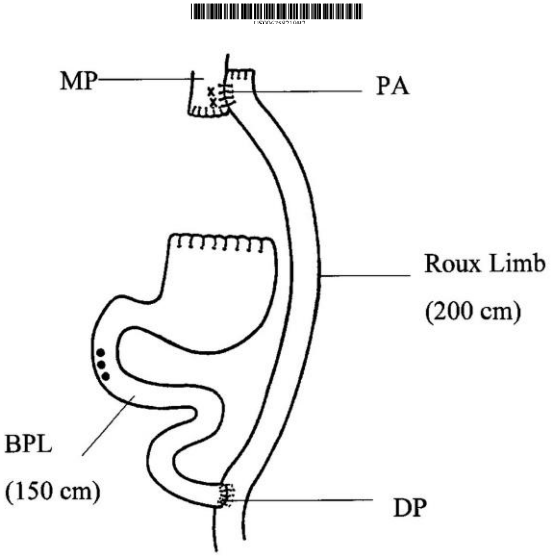
RYGB WHY BAND?





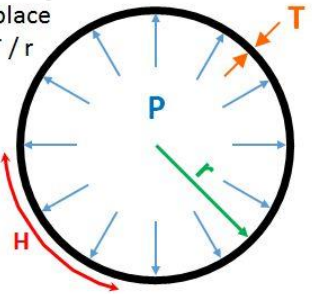


The Micropouch Patent MGB

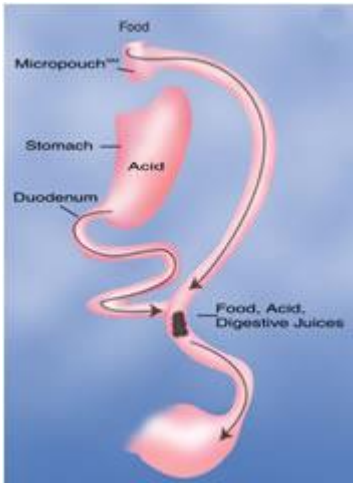


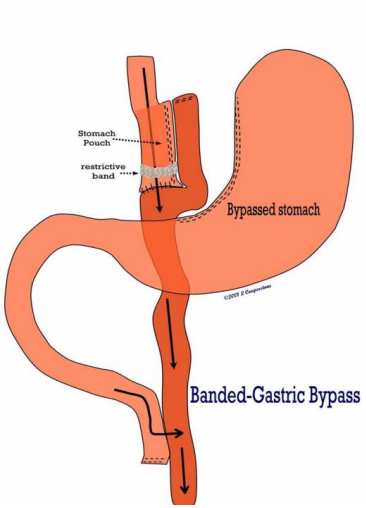
Law of Laplace

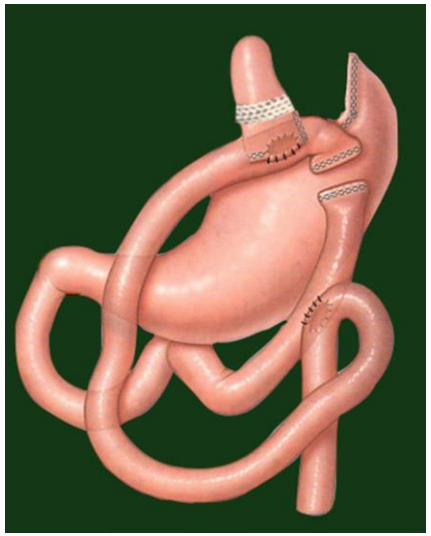
$P = 2HT / r$

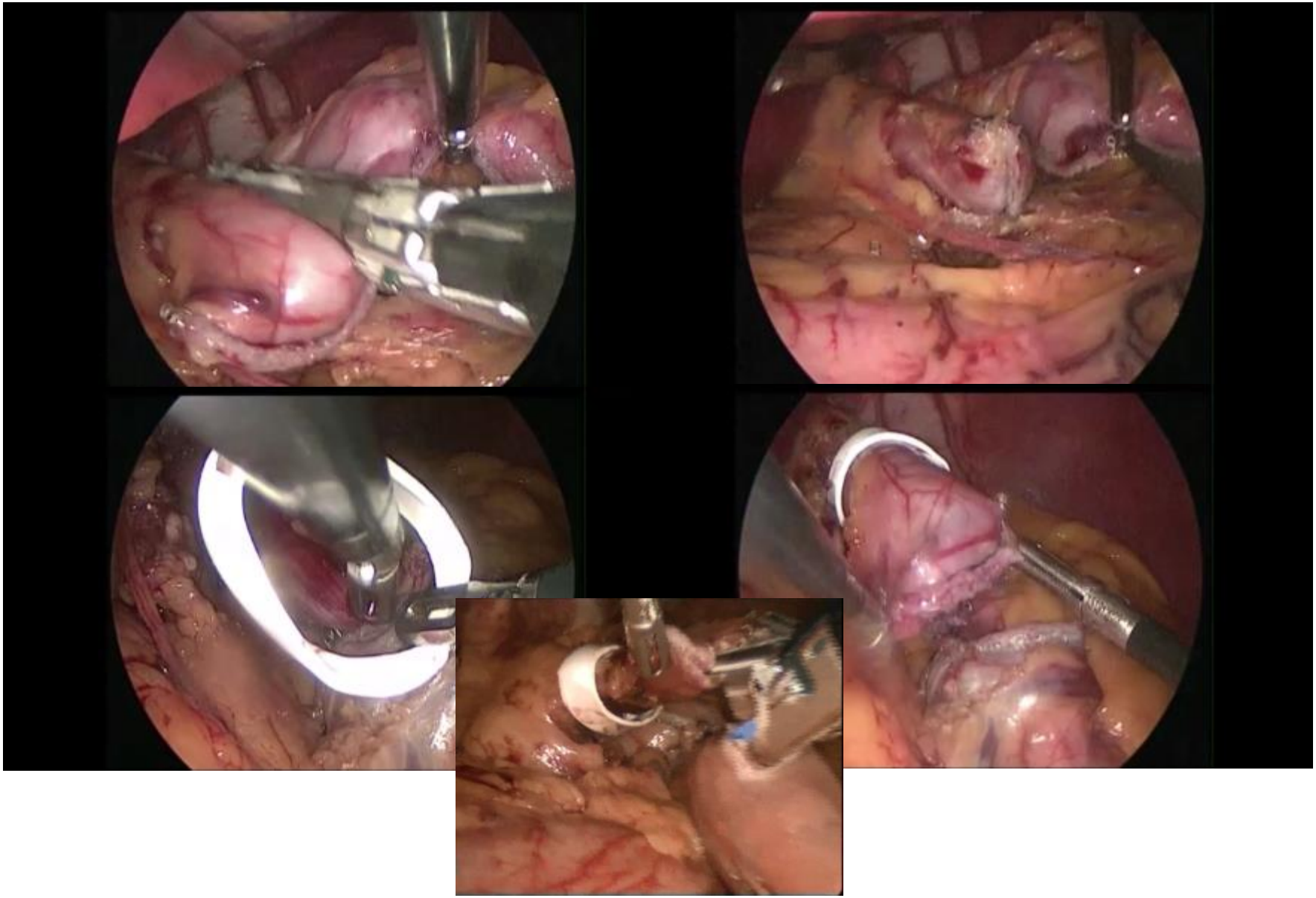


Rational behind long BP BMRYGB

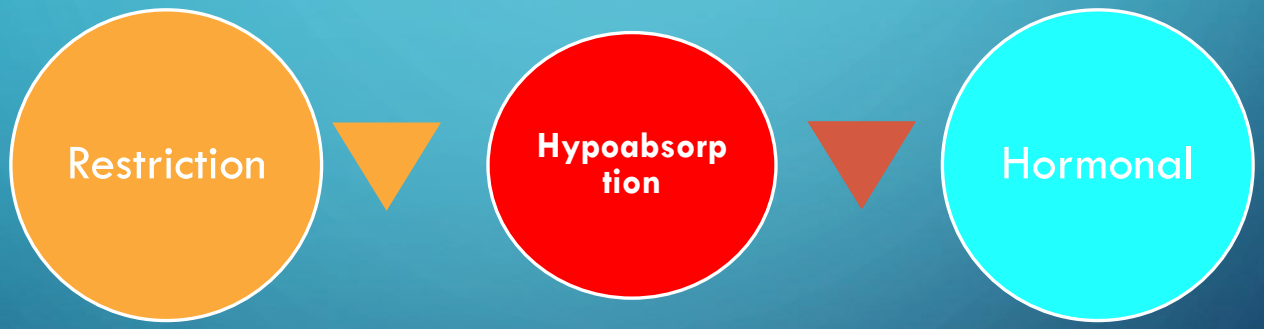








PROBLEM: BARIATRIC SURGERY DESIGN ELEMENTS: CHANGES WITH TIME



How each procedure works

	Restriction	Hormonal	Hypo absorption
Sleeve Gastrectomy	++	±	-
OAGB	+	+++	++
RYGB	++	++	+
SADIs/DS	+	+++	++
Long BP BMRYGB	**++**	**+++**	**++**

How Procedures Fail: What happens Later

	Restriction	Hormonal	Hypoabsorption	Mal Adaptive behavior
Sleeve Gasterectomy	-	-	-	++
OAGB	-	++	+	++
RYGB	-	+	-	++
SADIs/DS	-	++	++	++
Long BP BMRYGB	**++**	**++**	**++**	**++**

Logic defying science is wrong

- Gasrtic Pouches will not dilate
- Sleeves and reflux no problem
- OAGB no bile reflux, no anastomotic ulcer, no internal hernia

Our experience

- Since 1996 , 4500+ bariatric procedures.
- 1996-2001 Randomized 4 procedure comparison LAGB,VBG,RYGB & BPD
- Gradually shifted to long BP banded micropouch RYGB (FOBI,SAPALA)

ROUX-EN-Y LIMB LENGTHS CHANGES OVER THE YEARS

- **The Shorter the BP limb the better the Calcium absorption (Sugarman)**
- **Distal (Malabsorptive) RYGB (Brolin)**
- **The long BP limb gives better weight loss**

THE LONG BP LIMB WITH RYGB

- Research conclude
  superior weight los

Int J Obes (Lond). 2022; 46(11): 1983–1991.
Published online 2022 Aug 4. doi: 10.1038/s41366-022-01186-0
PMCID: PMC9584808
PMID: 35927470

Length of biliopancreatic limb in Roux-en-Y gastric bypass and its impact on post-operative outcomes in metabolic and obesity surgery—systematic review and meta-analysis

Anna Kamocka,[1] Swathikan Chidambaram,[2] Simon Erridge,[2] Gauri Vithlani,[2] Alexander Dimitri Miras,[1,3] and Sanjay Purkayastha[2]

Conclusion

Based on the outcomes of the present study, there is no definitive evidence to suggest that alteration of the BPL affects the quantity of weight loss or resolution of co-existent metabolic comorbidities associated with obesity.

Randomized Controlled Trial > Obes Surg. 2014 Oct;24(10):15
doi: 10.1007/s11695-014-1245-7.

**Gastric bypass with long alimentar
pancreato-biliary limb--long-tern
loss, resolution of co-morbidities a
parameters**

Bent Johnny Nergaard [1], Björn Geir Leifsson, Jan Hedenbro, Hjörtur Gislason

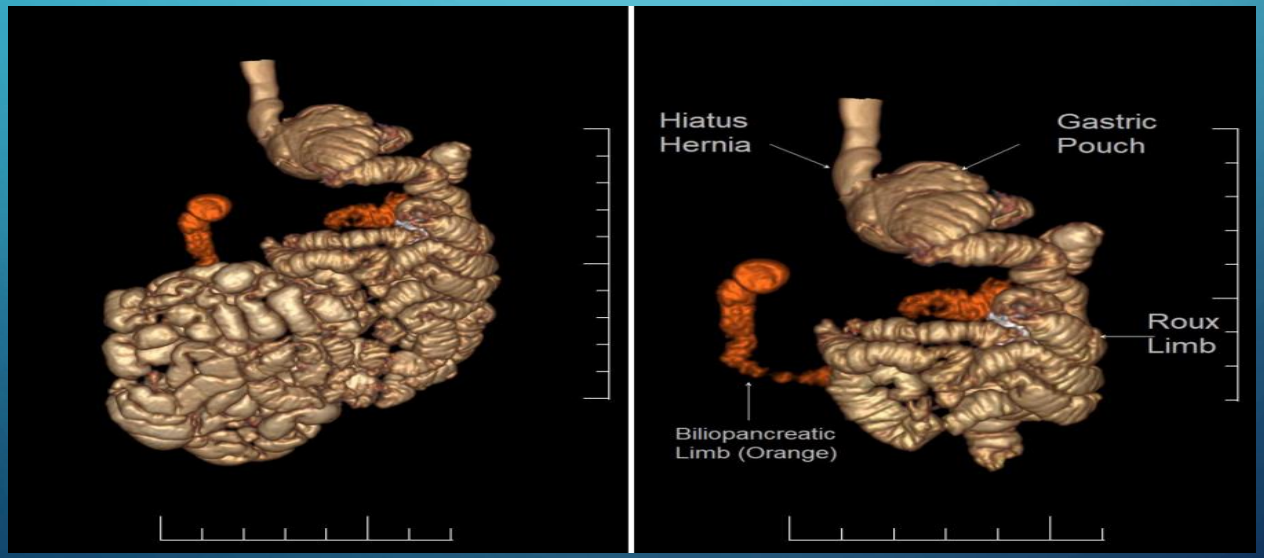
Conclusions: Gastric bypass with a 2-m BP-limb gives better weight loss than gastric bypass with a 60-cm BP-limb and a 150-cm A-limb. Metabolic follow-up is of utmost importance, as most patients needed repeated adjustments of their supplementation.

The Radiological Extent of Biliopancreatic Limb Reflux in One Anastomosis Gastric Bypass vs a Short Biliopancreatic Limb Standard Roux-en-Y Gastric Bypass vs Long Biliopancreatic Limb Roux-en-Y Gastric Bypass: Is Longer Biliopancreatic Limb Necessary?

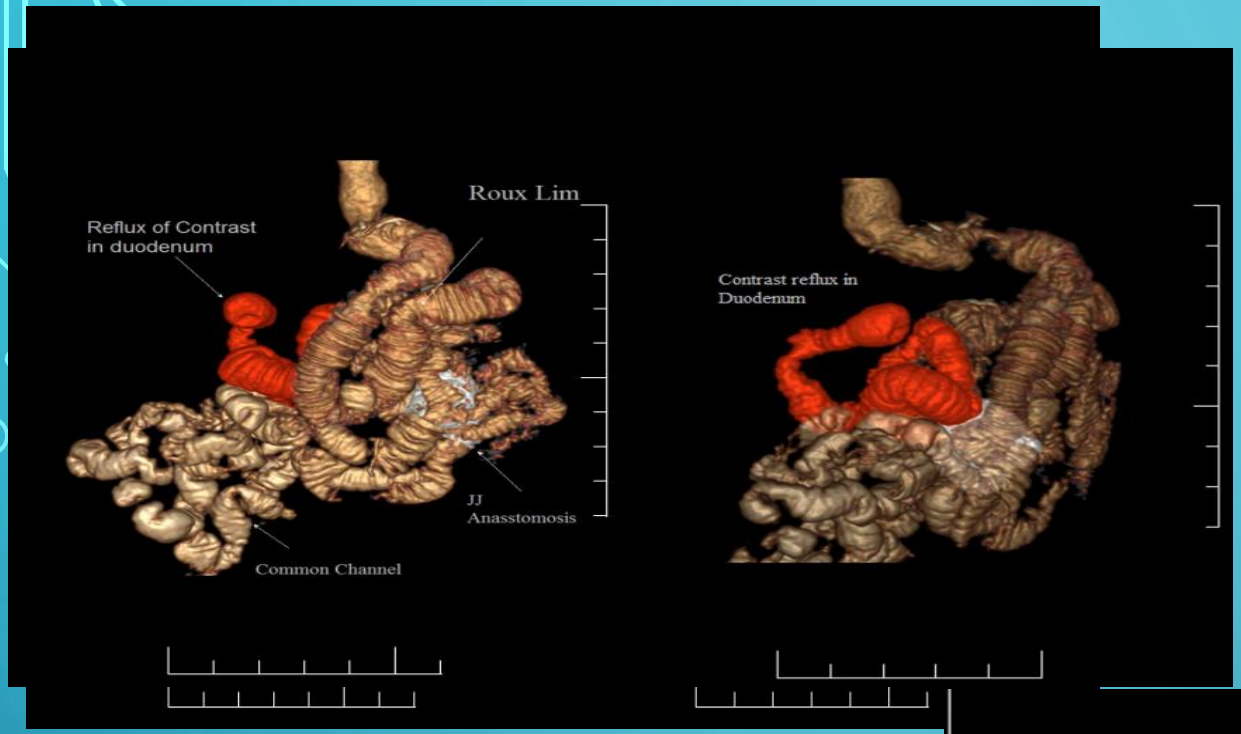
Adel Mabrouk- Ahmed Osman- Tamer Othman- Amen Othman – Khaled Gawdat

Department of Bariatric Surgery, Ain Shams University Hospital, Cairo, Egypt

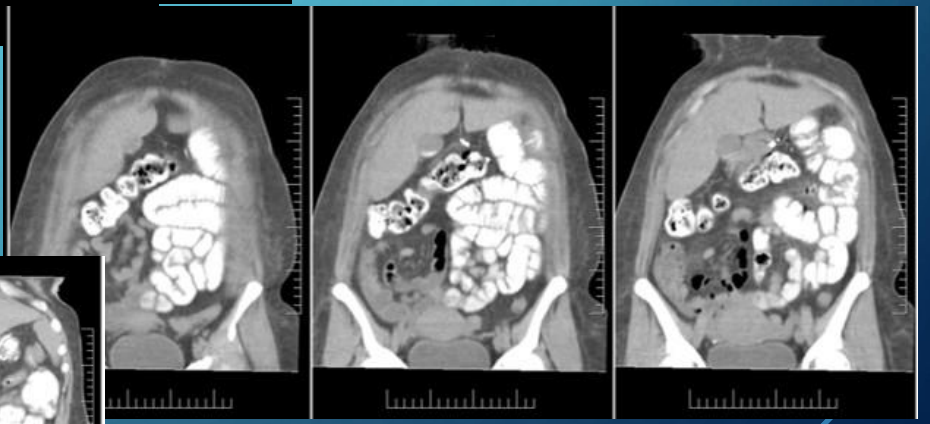
Dar El Teb Radiology center, Cairo, Egypt

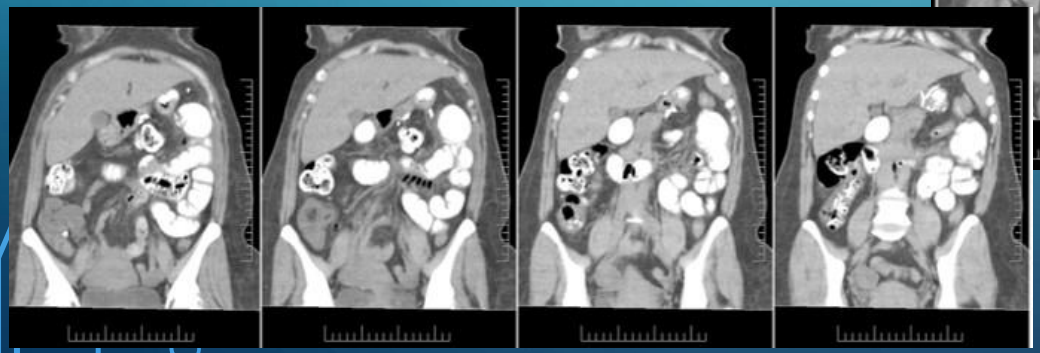


3d reconstruction with the BP limb colored in orange



the extent of reflux in a OAGB with a level 1 <50cm reflux from the gastrojujenal junction.





show contrast reaching the duodenum and excluded stomach

- **300 post-op bariatric surgery patients had each group consisting of 100 patients who underwent one of the following procedures: standard roux en Y gastric bypass with a short biliopancreatic limb, one anastomosis gastric bypass or Roux en Y gastric bypass with a long biliopancreatic limb.**
- **300 cases who were seen in the bariatric outpatient clinic Ain shams university hospitals in routine post-op follow up and were referred to radiology for a modified radiological technique of CT gastric volumetry – Virtual gastroscopy with small bowel measurements, between the period of January 2019 and January 2020 at Dar el Teb radiology center in Cairo, Egypt. These were Consecutive patients that agreed to go through the radiological procedure**

Variable	Total	S-RYGB	OAGB	L-RYGB	P value
Age (Years)	43	43 (21-65)	43 (18-69)	44 (19-70)	NS
Females	225	73	77	75	NS
Males	75	27	23	25	NS
Duration since procedure	5	8 (1-15)	4 (1-7)	4 (1-8)	NS

Table 1: Patient Demographics

3 groups

One anastomosis gastric bypass group had jejunal omega shaped loop ranging up to 200 cm (100-200 cm) from the duodo-jejunal junction .

the S-RYGB had a biliopancreatic limb up to 65 cm (40-65 cm) in length in the or 200 cm (150-200 cm) in the L-RYGB.

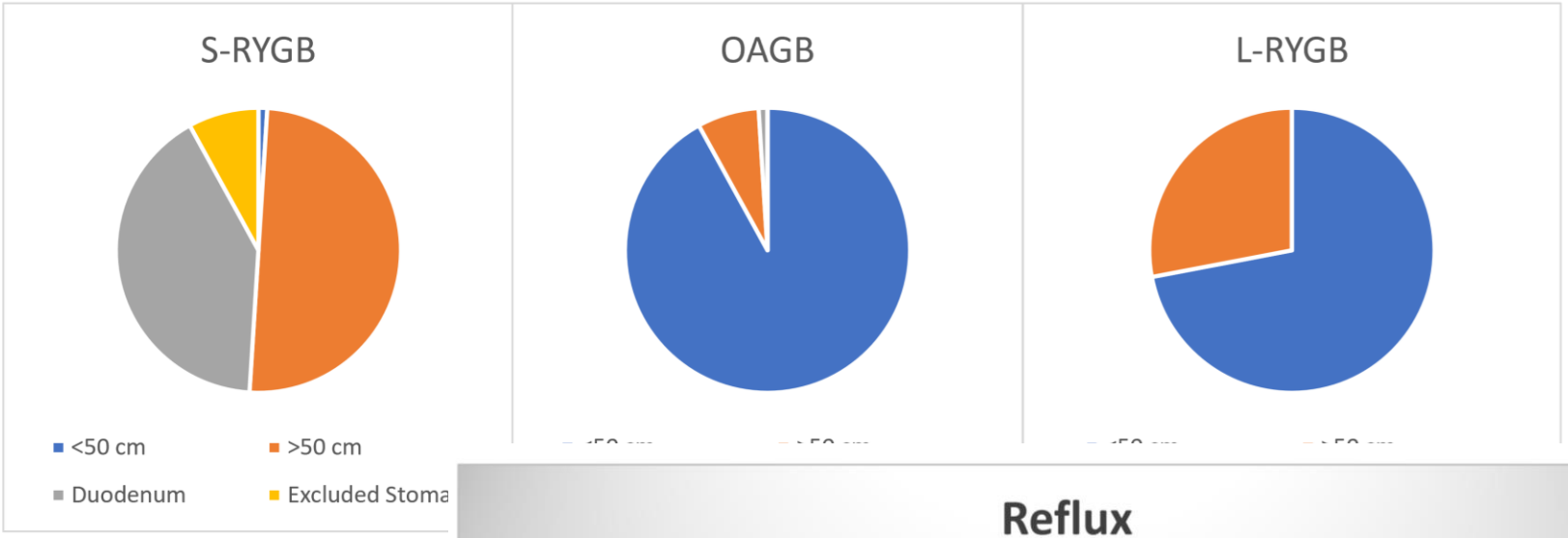
Outcomes

Primary outcomes were measures of level of reflux by categorizing patients into 4 levels of reflux: Level 1: <50cm, Level 2: >50cm, Level 3: duodenum and finally level 4: excluded stomach.

Reflux	S-RYGB *(n=100)*	OAGB *(n=100)*	P
<50cm			
>50cm			
Duodenum			
Excluded Stomach			

Reflux	S-RYGB *(n=100)*	L-RYGB *(n=100)*	P
<50cm	1	72	0.02
>50cm			
Duodenum			
Excluded Stomach			

Reflux	OAGB *(n=100)*	L-RYGB *(n=100)*	P
<50cm	92	72	NS
>50cm	7	28	NS
Duodenum	1	0	NS
Excluded Stomach	0	0	NS



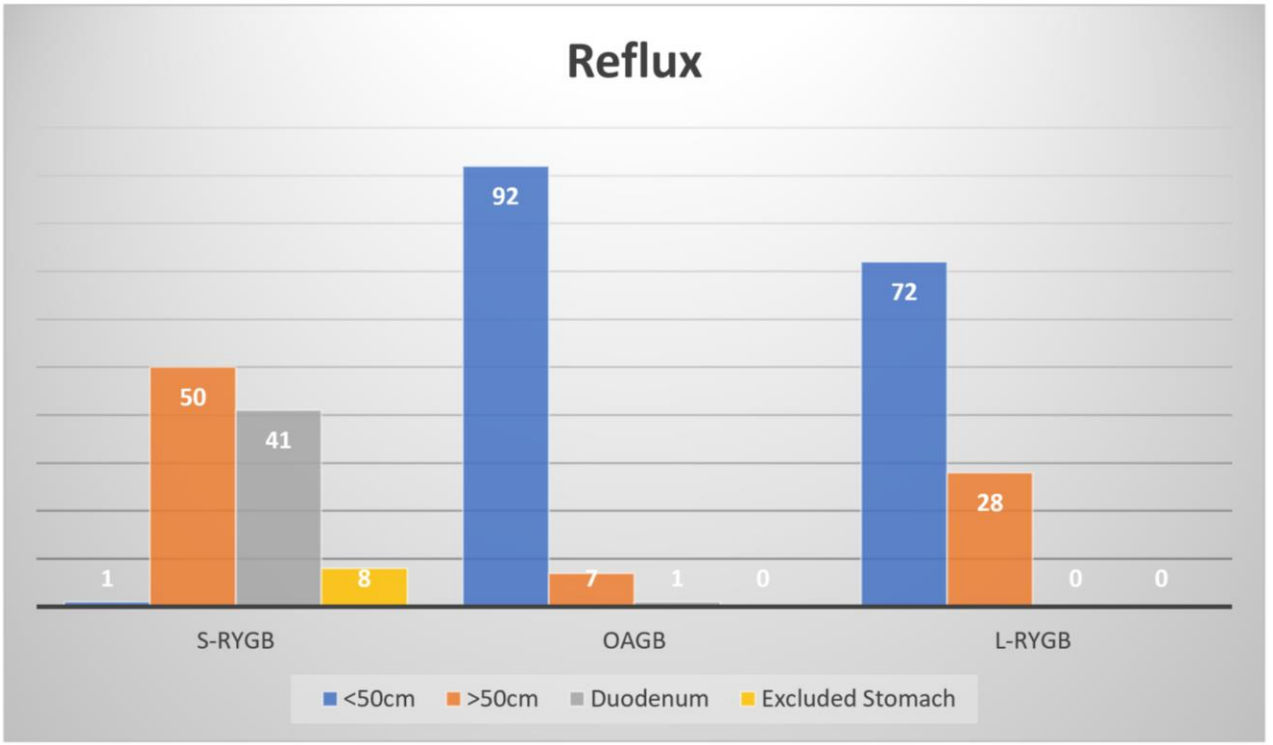


Figure 6: The level of reflux in each procedure

THE TROUBLE WITH MANY OF US IS THAT WE WOULD RATHER BE RUINED BY PRAISE, THAN SAVED BY CRITICISM

Things To Remember

Obesity is not a GIT problem.

Procedure anatomy changes with time, hormonal changes decrease with time and results change.

The first 18 months for every bariatric procedure is a Honey moon period, later results vary, your results at 5 and 10 years will be completely different than your initial results.

Ego is the enemy of Science.

CONCLUSION

- Not All gastric bypasses are the same
- S-RYGB was significantly associated with more reflux to the duodenum and excluded stomach compared to OAGB and L-RYGB
- OAGB vs L-RYGB showed no significant difference to the degree of reflux
- Longer BPL in Bypass type procedures should be encouraged in all gastric bypass type procedures to decrease the duodenogastric reflux and maintain the duodenal exclusion mechanism of the bypass
- Celebrate your success and find humor in your failures. Don't take your self so seriously, no body else does

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Middle East & North African Chapter

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ESBS

3rd IFSO MENAC | 20th ESBS Meeting

12-14 December 2024 | Cairo, Egypt

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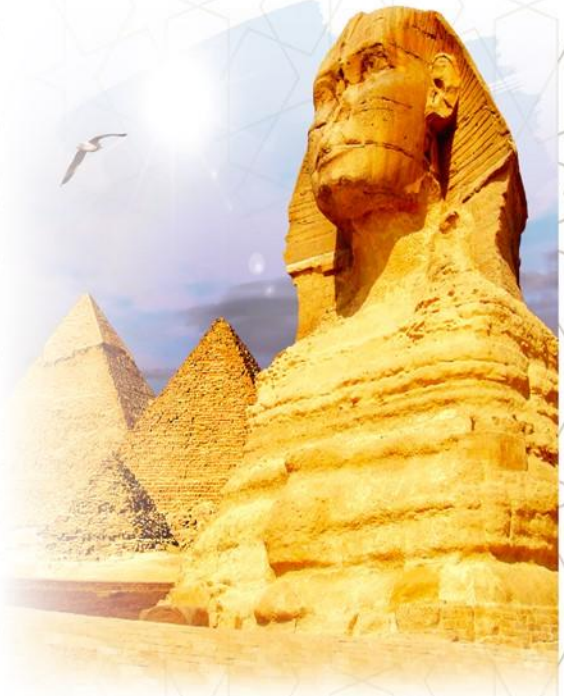

Abstract Submission is still open

In collaboration with

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Pan Arab Society For Metabolic And Bariatric Surgery

الجمعية الخليجية لجراحات السمنة و الأمراض الاستقلابية
Gulf Obesity & Metabolic Surgery Society