One Anastomosis Gastric Bypass will become the Most Performed Bariatric Procedure

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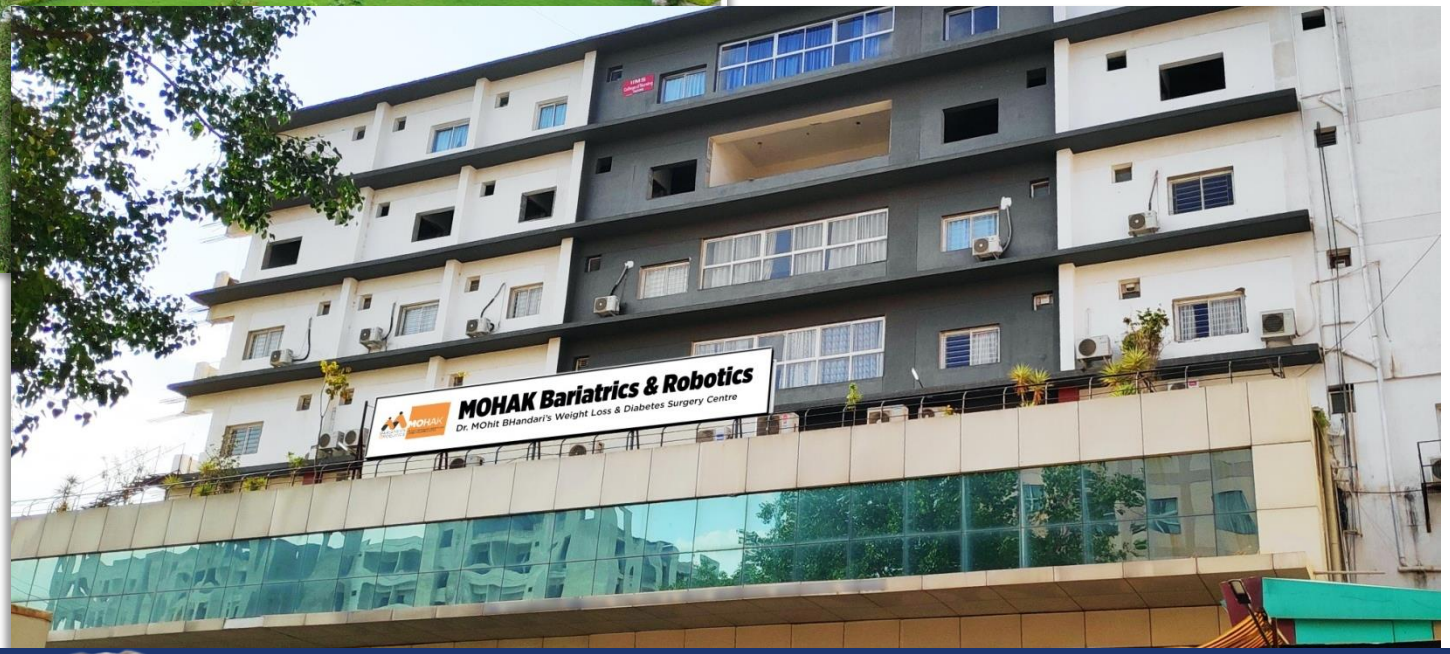
VISION WITH ACTION

← INDORE, INDIA



MOHAK BARIATRIC AND ROBOTIC SURGERY CENTER INDORE, INDIA (MBRSC)

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MOHAK BARIATRICS ROBOTICS WEIGHT LOSS & DIABETES SURGERY CENTRE

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Indore- Mumbai- Hyderabad- Bangaluru


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DISCLOSURE

Mohit Bhandari MD

Consultant to:

- Johnson and Johnson
- Medtronic
- Bariatric Solution
- Intuitive Surgical
- Karl Storz
- Stryker
- Apollo Endo-surgery
- Pentax
- Olympus

Mathias Fobi MD FACS, FICS, FACN

- Founding President, Bariatec Corporation

Manoel Galvao Neto

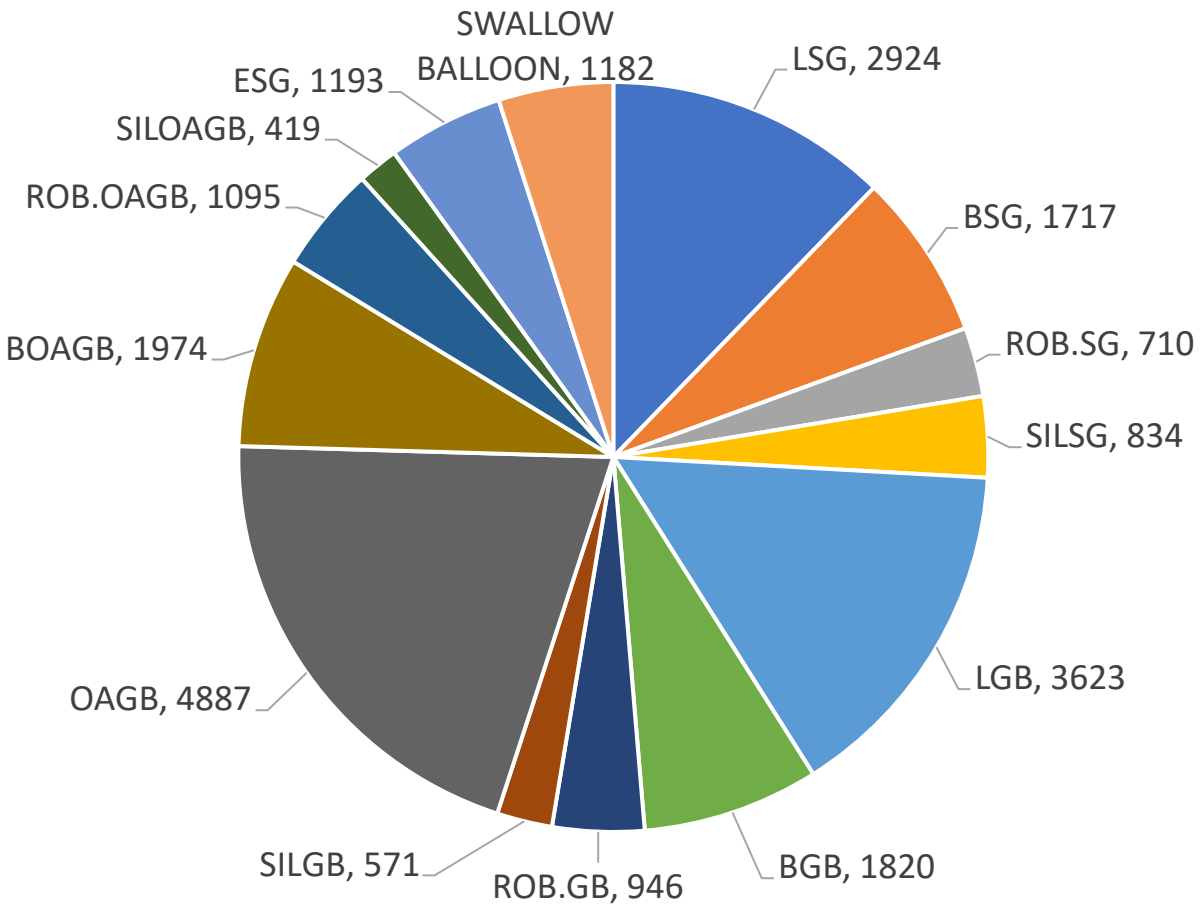
- Director Bariatric Endoscopy

CASE MIX DISCLOSURE

2010- 2024

BARIATRIC PROCEDURES MIX DISCLOSURES MBRSC
January 2010 – July 2024

TOTAL	30,400
LSG	7185
LGB	7960
OAGB	9375
ESG	1493
SWALLOW BALLOON	2182
Other	1505



OAGB-MGB Procedures = 9375- what is the clinical experience of the one debating!

Procedure	Method	Number
OAGB (6800)	Laparoscopic	5632
	Robotic	1168
Banded OAGB (2575)	Laparoscopic	2575
TOTAL		**9375**

There is a tendency to reject new theories when they contradict established practice or understanding.

- ***"the Semmelweis reflex"***

Paradigm-changing ideas are usually met with derision and the proponent the object of ridicule.

- ***Fobi***

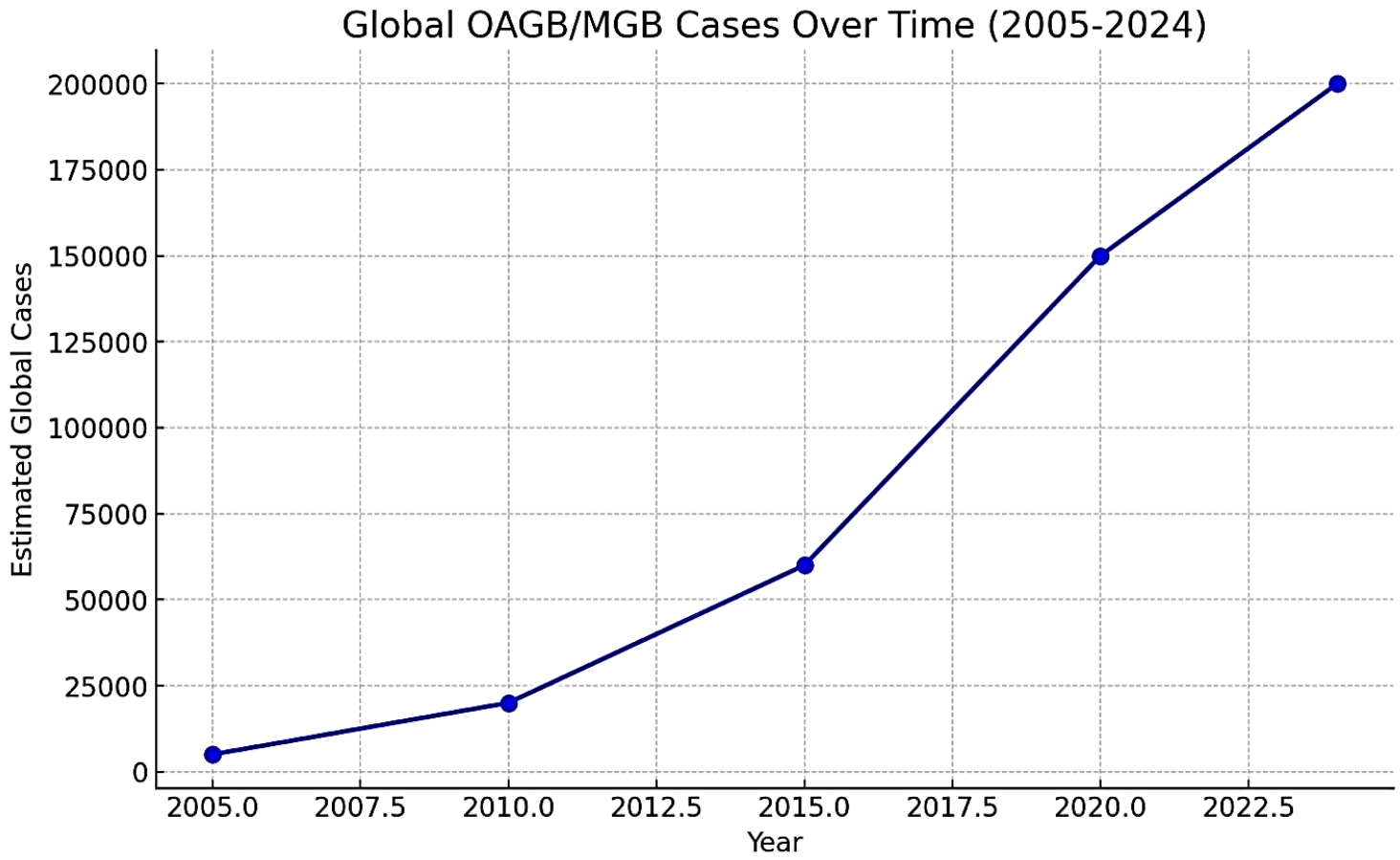
An effort to simplify the laparoscopic gastric bypass operation led to the rebirth of a modified loop gastric bypass, a single anastomosis gastric bypass which was named a mini-gastric bypass(MGB) . Now called OAGB/MGB

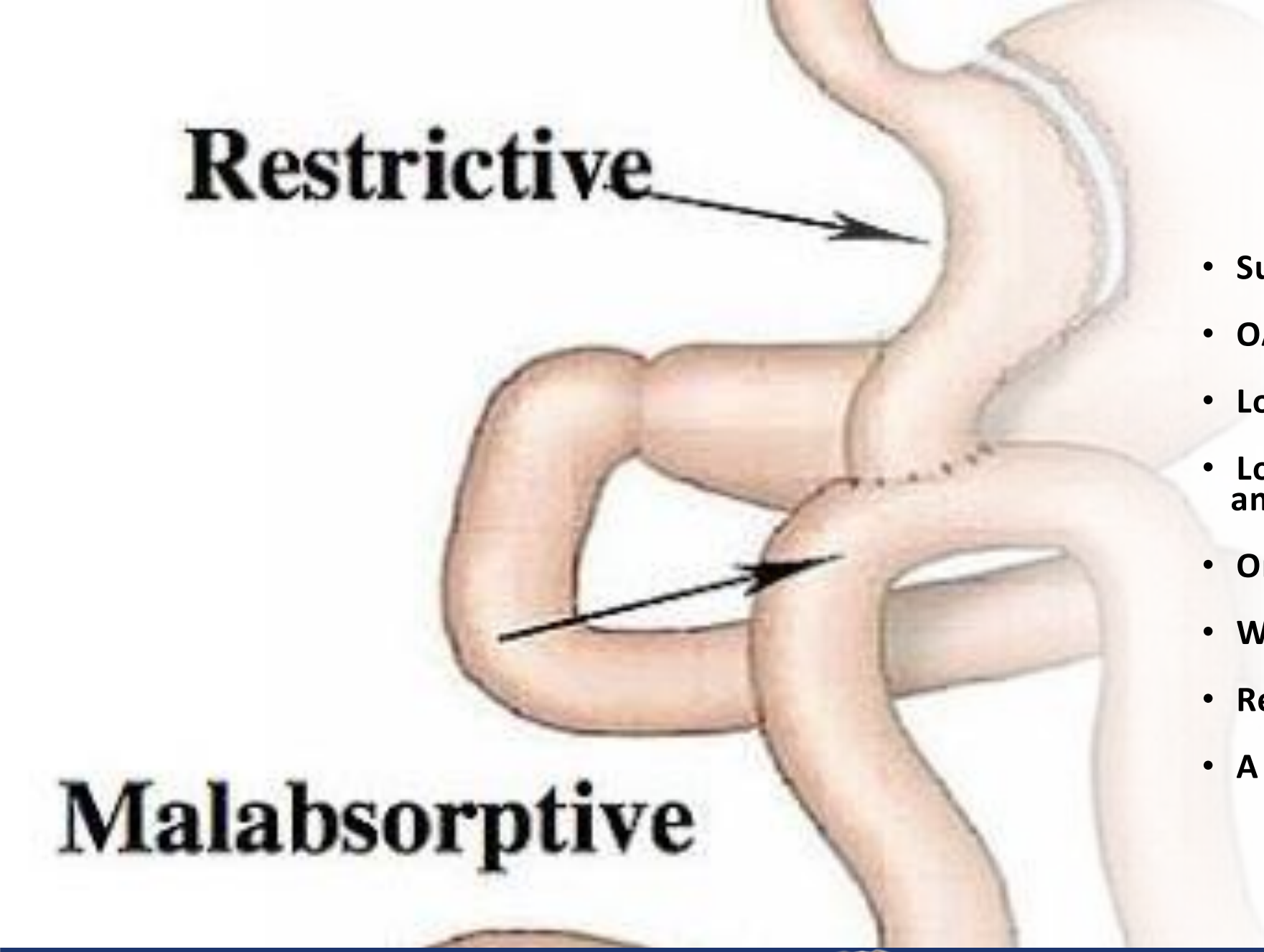
1997

- Unfortunately, this modification was and still is the center of the controversy

- However, a journey of more than 20 years has led to modifications and better understanding of OAGB/SAGB/MGB

Estimated global growth of OAGB/MGB cases from 2005 to 2024





- Surgical Procedure:
- OAGB/MGB
- Long vertical tube 12-20cm long
- Loop Gastro jejunal anastomosis
- One anastomosis
- Wide pouch ,wide anastomosis
- Restrictive but not obstructive
- A long BP Limb 180cm

Surgical Technique: OAGB/MGB

- A low lying gastro-enterostomy 3-5cm wide
- Easy to perform
- No tension on the anastomosis

Experience with OAGB/MGB
2015 – Review article

Victorzon M et al. Scand J Surg. 2015 Mar;104(1):48-53. Single-anastomosis gastric bypass: better, faster, and safer?

- The abstracts of 73 ar… …icates, and irrelevant articles, 10 articles remain…
- Several th… …o be an easier, safer, faster, an… …. The proponents of this operat… …ons compared to the situation after… …ing this method, mainly concerning the poss… …pancreaticoduodenal reflux in the gastric pouch.

Comment:

Several thousands MGBs performed over 15 yrs.
Easier / safer / faster & more effective than RYGB
Easier to revise & reverse
Controversy regarding carcinogenic effect of BPD reflux

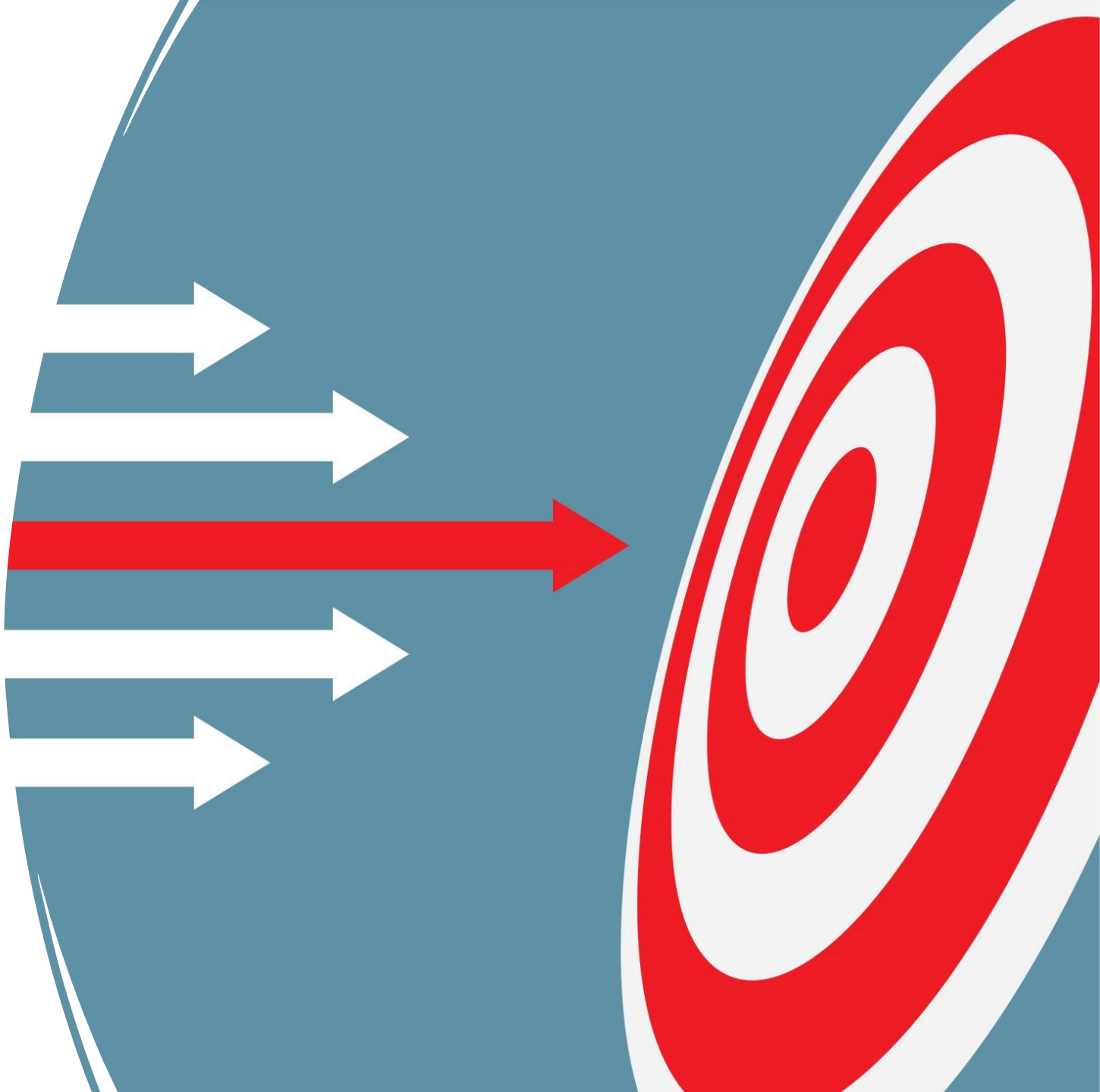
Clinical Outcomes- What is the personal experience of those debating!

- OAGB has shown promising results in terms of weight loss.
- The procedure provides significant reductions in excess weight and overall body mass.

Study	Sample Size	Average Excess Weight Loss (EWL) (%)	Average Total Weight Loss (TWL) (%)	Follow-up Duration
Smith et al., 2023	200	68%	31%	3 years
Jones et al., 2022	150	72%	33%	5 years
Patel et al., 2024	300	65%	29%	2 years
Bhandari et al., 2024	**5182**	70.3%	27.3%	**10 years**

Why are they targeting OAGB !

- Rutledge !
- Bile reflux
- Marginal ulcers
- Carcinoma
- Nutritional issues
- Not effective and has long term issues



Marginal ulcer

Meta analysis – 5095 MGB

- Marginal ulcer: 2.8%

Kamal Mahawar et al. Obes Surg 2013;23:1890-1898

2410 pts

- Marginal ulcer: 5.6%
- 2.1% of all marginal ulcers required revision

Rutledge et al. Obes Surg 2005;15(3):1304-8

1163 pts

- Marginal ulcer: 0.6%

Lee et al. Obes Surg 2012;22(12):1827-34

423 pts

- Marginal ulcer: 8%

Wang et al. Obes Surg 2005;15(5):648-54

Marginal Ulcer : 0.6%

Noun et al

Morbidity
Bile reflux after OAGB/MGB

Meta analysis – 5095 MG

- Reflux: 2.0%

Kamal Mahawar et al. Obes Surg 2013;23:1890-1898

1163 pts.

- Reflux: 3.7%

Lee et al. Obes Surg 2012;22(12):1827-34

Morbidity
Malignancy

Wu CC, Lee WJ, Ser KH, et al. Gastric cancer after mini-gastric bypass surgery: a case report and literature review. Asian J Endosc Surg. 2013;6:303–6.

- Gastric ca
- a es
-
- the from 1 to 22 years.

Single case report of malignancy after MGB in remnant stomach 9 yrs after surgery

Total 7 cases of gastric cancer reported so far in all kind of bypasses with time gap between 1 to 22 yrs

Morbidity

Protein, Iron and Vitamin deficiencies

Maud Robert et al. 2019. Efficacy and safety of one anastomosis gastric bypass versus Roux-en-Y gastric bypass for obesity (YOMEGA): a multicentre, randomised, open-label, non-inferiority trial

21·4% in the OAGB group were nutritional complications versus none in the RYGB group (p=0·0034)

	Per-protocol population (n=234)	RYGB group (n=117)	OAGB group (n=117)	p value
Haemoglobin, g/L	-6·6 (16·5)	-3·0 (10·0)	-10·3 (20·6)	0·036
n (missing data)	129 (105)	65 (52)	64 (53)	..
Albumin, g/L	0·3 (3·7)	0·1 (3·5)	0·5 (3·9)	0·51
n (missing data)	124 (110)	61 (56)	63 (54)	..
Prealbumin, g/L	-0·0 (0·1)	-0·0 (0·1)	-0·0 (0·1)	0·78
n (missing data)	113 (121)	54 (63)	59 (58)	..
Ferritin, in µg/L	-27·9 (174·3)	-31·3 (136·6)	-24·7 (204·1)	0·85
n (missing data)	119 (115)	57 (60)	62 (55)	..
Transferrin saturation ficient, %	6·0 (14·00)	5·8 (10·3)	6·2 (16·9)	0·94
ata)	99 (135)	49 (68)	50 (67)	..
	-2·0 (28·4)	-0·6 (25·5)	-3·2 (31·1)	0·57
	73 (161)	35 (82)	38 (79)	..
	12·9 (20·6)	15·5 (21·8)	10·0 (19·2)	0·12
	91 (143)	47 (70)	44 (73)	..
	10·9 (174·6)	-6·4(136·6)	28·5 (206·0)	0·94
	119 (115)	60 (57)	59 (58)	..
nol/L	21·3 (32·1)	25·2 (34·5)	17·4 (29·5)	0·51
n (missing data)	114 (120)	56 (61)	58 (59)	..
Parathyroid hormone, pg/mL	-0·7 (32·2)	-8·2 (27·7)	5·2 (34·5)	0·1
n (missing data)	89 (145)	39 (78)	50 (67)	..

Data are mean (SD) or n (missing data) and results of blood test samples. RYGB=Roux-en-Y gastric bypass. OAGB=one anastomosis gastric bypass.

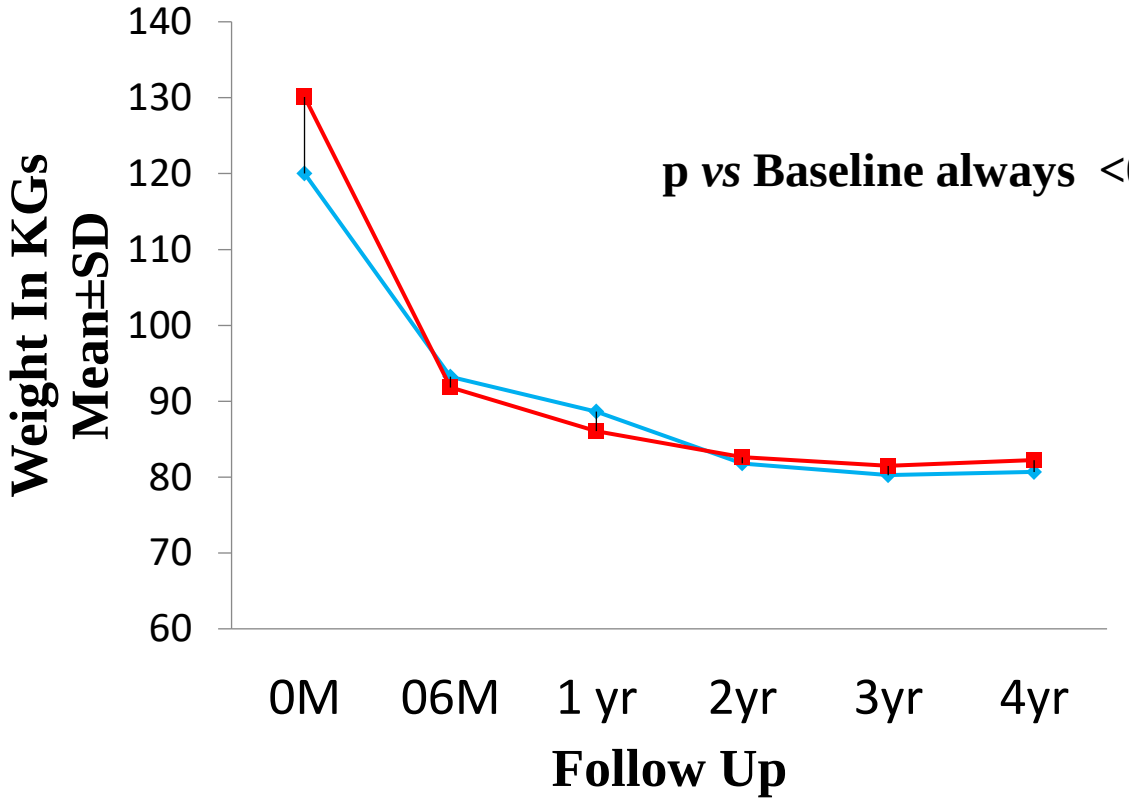
Resolution of Comorbidities

OAGB has also been associated with significant improvements in obesity-related comorbidities.

Study	Diabetes Remission (%)	Hypertension Improvement (%)	Obstructive Sleep Apnea (OSA) Improvement (%)
Smith et al., 2023	60%	55%	50%
Jones et al., 2022	65%	60%	55%
Patel et al., 2024	70%	62%	58%
Bhandari et al., 2024	**89%**	**85%**	**87%**

Comparative Analysis

OAGB vs. Banded RYGB



Post-Op 1-4 Years

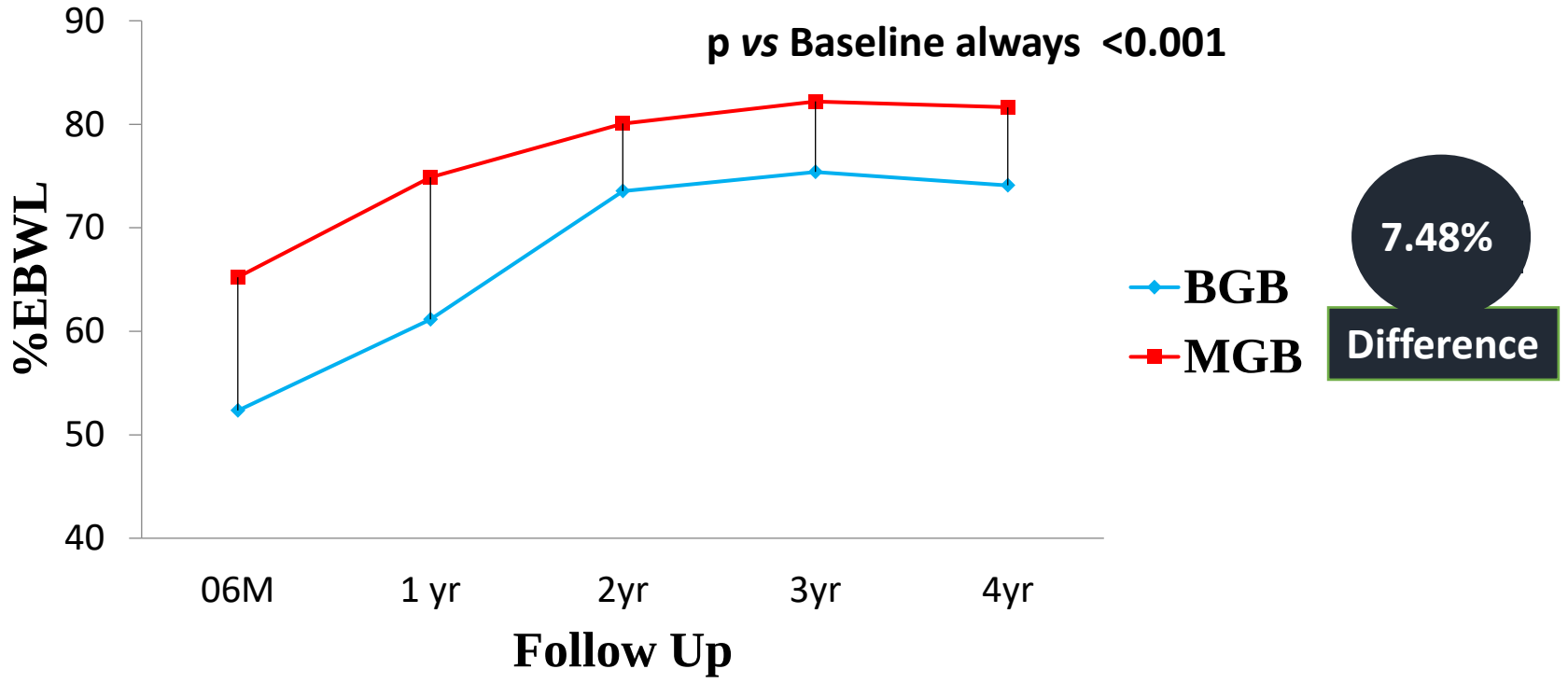
WT Loss 39.31 Kg.

WT Loss 47.83 Kg.

WEIGHT LOSS OUT COME						
	0M	06M	1 yr	2yr	3yr	4yr
BGB	120.00±23.34	93.23±14.21	88.64±13.01	81.79±10.43	80.25±10.44	80.69±10.31
MGB	130.08±23.54	91.82±12.30	86.05±10.66	82.61±9.47	81.49±9.30	82.25±10.20

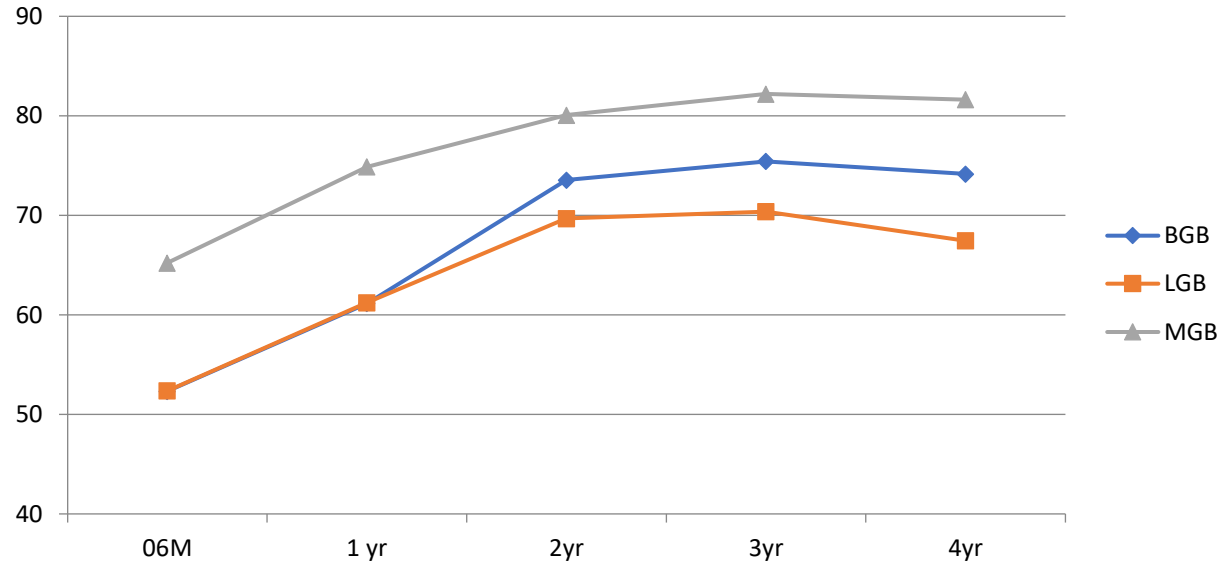
Comparative Analysis

OAGB vs. Banded RYGB



% EBWL LOSS OUT COME	06M	1 yr	2yr	3yr	4yr
BGB	52.34±7.23	61.15±7.75	73.55±7.40	75.43±9.88	74.16±9.42
MGB	65.23±2.59	74.88±2.87	80.07±3.82	82.20±4.41	81.64±8.49

OAGB/MGB *VS* BGBP *VS* RYGB



% EBWL LOSS OUT COME					
	06M	1 yr.	2yr	3yr	4yr
BGB	52.34±7.23	61.15±7.75	73.55±7.40	75.43±9.88	74.16±9.42
RYGB/LGB	52.38±6.03	61.24±6.45	69.69±6.89	70.38±11.01	67.45±11.36
MGB	65.23±2.59	74.88±2.87	80.07±3.82	82.20±4.41	81.64±8.49

What we now know of the OAGB/MGB

- Simple procedure
- Shorter operating time
- Lower operation risk
- Easy to reverse
- Many options for re-intervention
- Very low incidence of internal hernia
- Weight loss at par if not better than with RYGB or SG
- Resolution of Co Morbidities at par if not better than RYGB and SG
- High patient's satisfaction
- Fewer complications

Comparison with Traditional Procedures

- **Roux-en-Y Gastric Bypass (RYGB):** Involves two anastomoses—one between the pouch and the jejunum and another between the jejunum and the bypassed stomach. This adds complexity and lengthens the operative time.

- **Sleeve Gastrectomy (SG):** Involves the removal of a large portion of the stomach to create a sleeve-shaped stomach. It does not bypass any intestines but may lead to higher rates of gastroesophageal reflux disease (GERD).

Comparative Analysis

OAGB vs. RYGB

- The OAGB procedure is often compared with RYGB to highlight its benefits in terms of operative time and complication rates.

	OAGB	RYGB
Operative Time	60 minutes	120 minutes
Hospital Stay	2 days	4 days
Complication Rate	5%	8%

- ***Buchwald, H., et al.*** *(2004). Bariatric Surgery: A Systematic Review and Meta-analysis. Journal of the American Medical Association, 292(14), 1724-1737.*
- ***Luna, M., et al.*** *(2019). One Anastomosis Gastric Bypass versus Roux-en-Y Gastric Bypass: A Systematic Review and Meta-analysis. Obesity Surgery, 29(9), 2851-2860.*
- ***Sánchez, M., et al.*** *(2021). Comparative Outcomes of One Anastomosis Gastric Bypass and Roux-en-Y Gastric Bypass: A Single-center Experience. Surgical Endoscopy, 35(2), 645-654.*

Comparative Analysis

OAGB vs. LSG

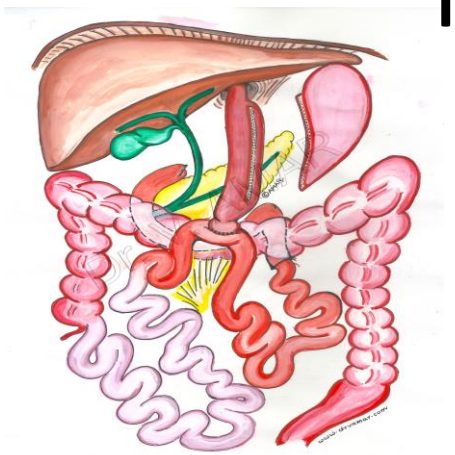
- When compared with Sleeve Gastrectomy, OAGB demonstrates effective weight loss with fewer gastrointestinal issues.

	OAGB	SG
Weight Loss (1 year)	70%	65%
GERD Incidence	10%	20%
Nutritional Deficiency	5%	10%

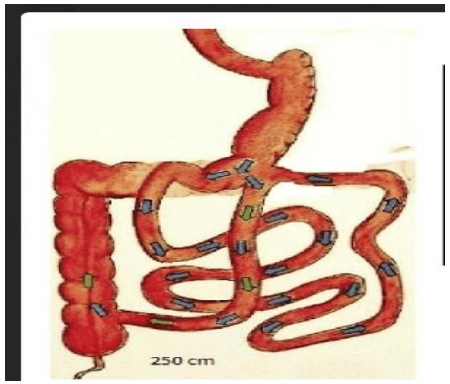
- ***Brethauer, S. A., et al. (2015).*** *The Effect of Sleeve Gastrectomy vs Roux-en-Y Gastric Bypass on Weight Loss and Comorbidities: A Meta-analysis of Randomized Clinical Trials. Journal of the American Medical Association, 314(22), 2371-2381.*
- ***Li, Y., et al. (2020).*** *One Anastomosis Gastric Bypass versus Sleeve Gastrectomy for Obesity: A Systematic Review and Meta-analysis. Bariatric Surgery and Patient Care, 15(4), 123-135.*
- ***Dapri, G., et al. (2018).*** *Comparative Study of One Anastomosis Gastric Bypass and Sleeve Gastrectomy: A Two-year Follow-up Study. Surgical Obesity and Related Diseases, 14(8), 1092-1101.*

Imitation is the sincerest of flattery

OAGB/MGB gave a rebirth to one anastomosis operation



Loop DJB



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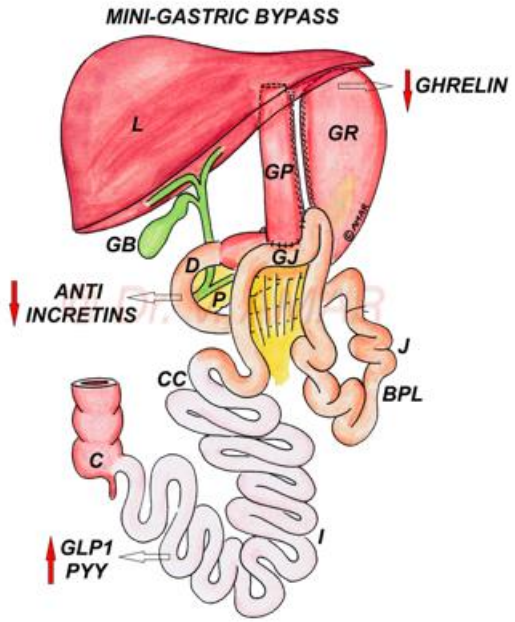
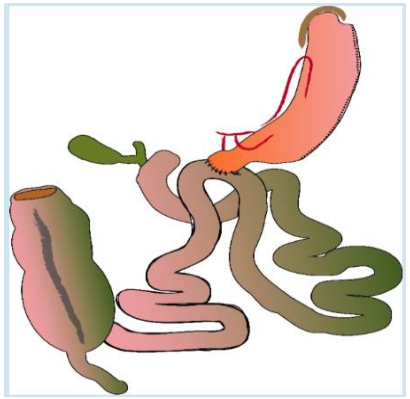


OAGB/SAGB/MGB

SAGI



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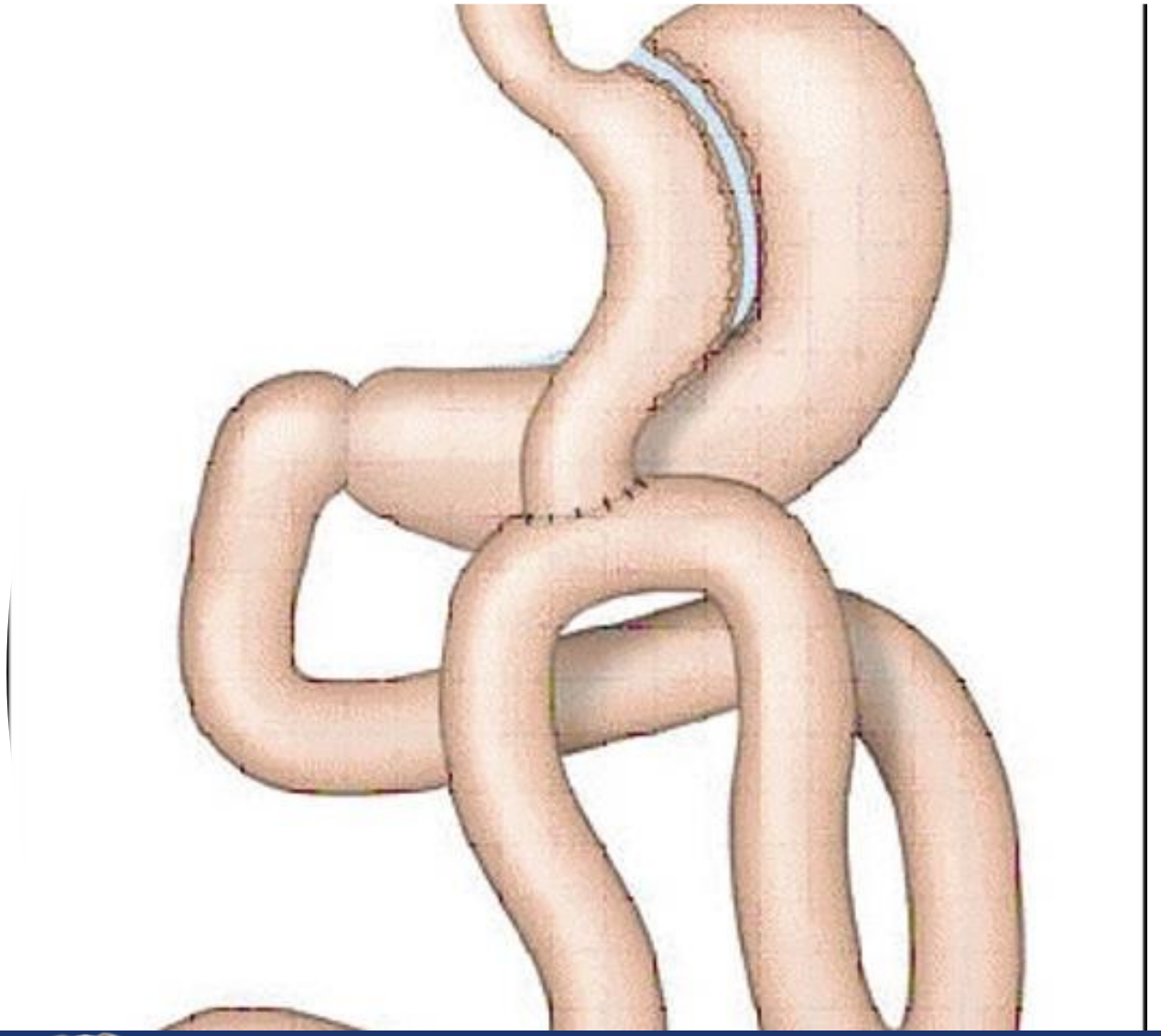
Conclusion

- The OAGB/MGB with a 180cm bilio-pancreatic limb in patients with no prior H/O GERD or endoscopic findings of GERD is a simpler and easier laparoscopic operation than either the RYGB or the SG.

- It is safe if pts are judiciously chosen & the limb length is kept on a conservative side



Conclusion

After all said and done

- The OAGB is a standard Bariatric procedure
- The OAGB will replace the RYGB as the standard for bariatric metabolic operations
- The OAGB will replace the SG as the most common bariatric operation

MOHAK TEAM

THANK YOU

We offer various treatment modalities for obesity. The operation is determined by the profile of the patient and guided by findings from analysis of the data from our prospectively maintained database