IFSO
International Federation for Surgery of Obesity & Metabolic Disorders

XXVI IFSO WORLD CONGRESS

IFSO NAPOLI 2023

S.I.C.OB. Italian Society of Bariatric and Metabolic Surgery
XXXI CONGRESSO NAZIONALE

NAPLES, ITALY
AUGUST 30-SEPTEMBER 1, 2023

MALABSORPTIVE SURGERY IN ELDERLY PATIENTS: OUTCOME ANALYSIS

A Curell, P González-Atienza, V Turrado-Rodríguez, X Morales, A Jiménez,
A de Hollanda, V Moizé, D Momblán, A Ibarzabal

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[X] I have no potential conflict of interest to report.

BACKGROUND

DEFINITIONS

- ✓ INSUFFICIENT WEIGHT LOSS (IWL)
  - ✓ <50% EWL% or BMI >35 Kg/m^2.
  - ✓ One of the most common reasons to qualify for revisional BS.

- ✓ WEIGHT REGAIN (WR)
  - ✓ Progressive weight regain after adequate weight loss has been achieved (EWL>50%).
  - ✓ 20-35% patients (after reaching *nadir* weight).
  - ✓ Non-consensus definition, considerable heterogeneity in methodology.

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El Ansari W *et al*. Review Obes Surg. 2021 Apr;31(4):1755-1766.
Shukla AP *et al*. Expert Rev Endocrinol Metab . 2018 Mar;13(2):67-76.

BACKGROUND

IWL/WR

Reappearance or worsening of **obesity-associated comorbidities**

Deterioration of the **quality of life**

Higher **complication** and **mortality** rates compared to primary BS

Previous surgery?

Associated GERD?

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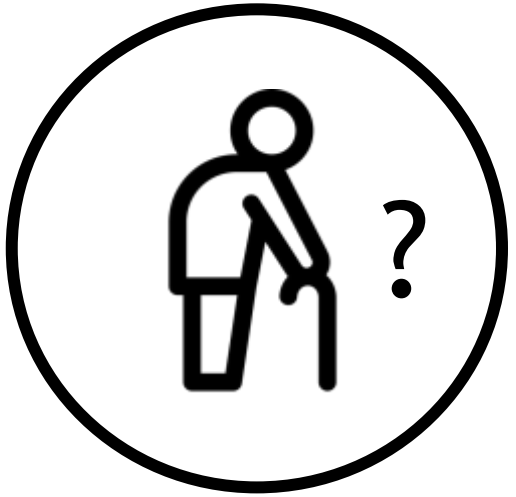
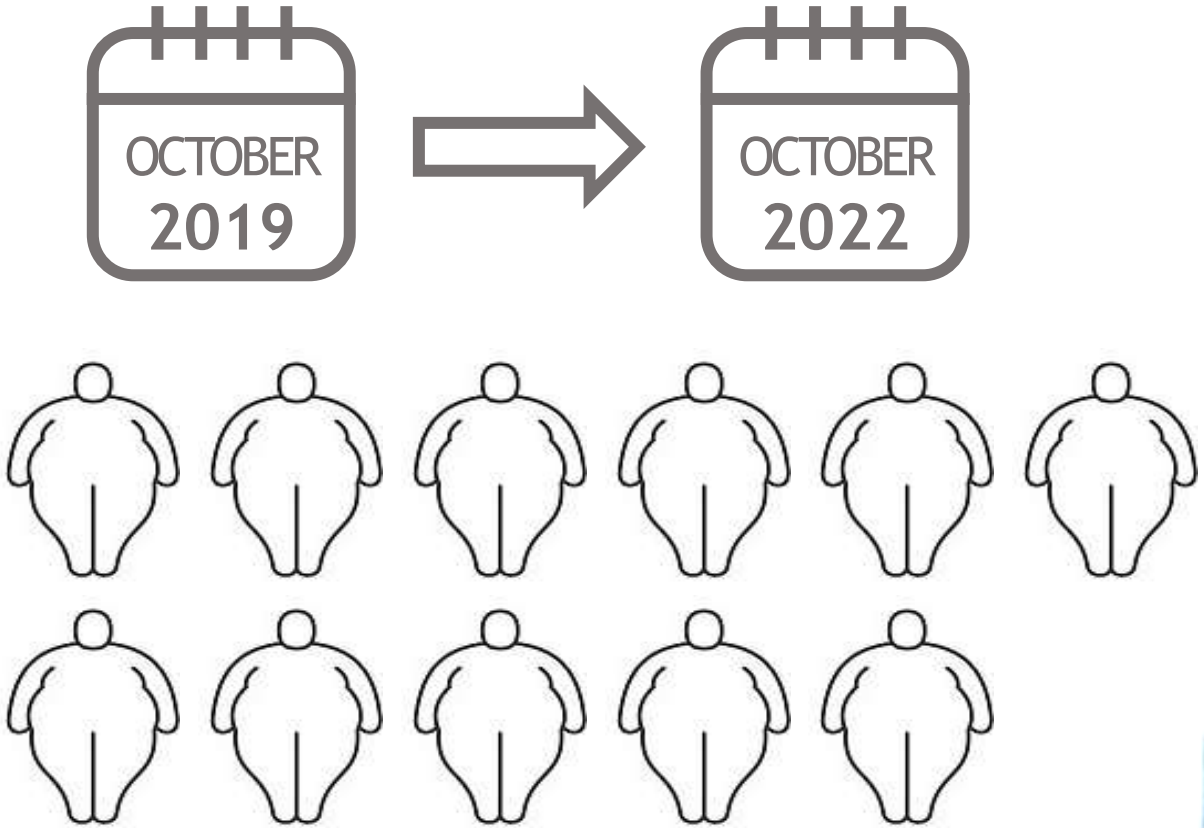
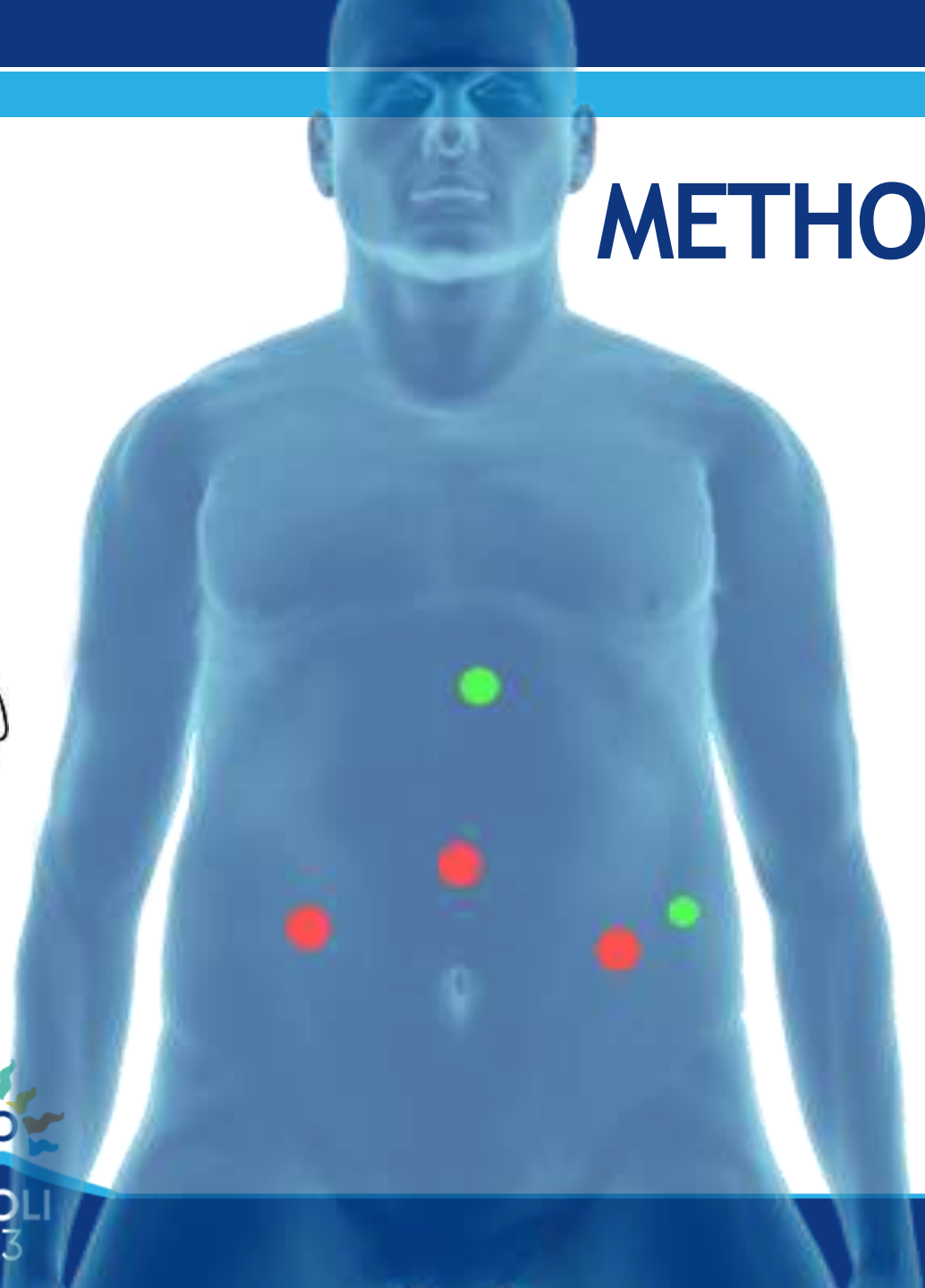


METHODS





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RESULTS

DEMOGRAPHIC VARIABLES

Sex	72.7% female / 27.3% male
Age	63.3 years-old (60–70)
BMI	44.03 Kg/m^2 (35.17–56.09)
Time between surgeries	95.7 months (17–190)

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Conversion from SG to **distal GBP** x6
(Common limb length: **150 cm** in 83.3%)

Distalization of previous GBP x3
(Common limb length: **150 cm**)

Conversion from SG to **SADI-S** x1
(Common limb length: **250 cm**)

Primary **SADI-S** x1
(Common limb length: **300 cm**)

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RESULTS

POSTOPERATIVE EVOLUTION

Intraoperative complications	0
Postoperative complications	9.09% (n=1) – Clavien 2
Mean hospital stay	2.36 days (2–3)

100% symptoms of GERD have resolved.

0% reoperations for malnutrition.

RESULTS

POSTOPERATIVE EVOLUTION

Follow-up	19.45 months (6—40)
BMI (1 year after surgery)	31.45 Kg/m^2 (24.63—36.51)
EWL% (1 year after surgery)	63.46% (26.06—102.71)
TWL% (1 year after surgery)	25.81% (10—38.3)

EWL% (1 year after surgery)— global	75.88% (62.84-101.76)
TWL% (1 year after surgery)— global	37.78% (34.78-46.05)

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RESULTS

Intestinal transit

Daily bowel movements	3.77 dep/day (1–7)
Flatulence	45.4%
Steatorrhea	36.4%
Treatment with Kreon®	27.3%

Nutritional status

Ca or Vit. D deficiency	36.4%
Iron	45.4%
Protein deficiency	36.4%
Vit. A / vit. K deficiency	9.09% / 9.09%

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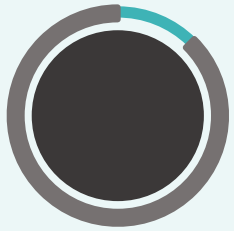
DISCUSSION



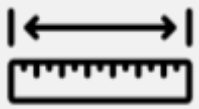
10-35%
GBP:
IWL/WR

Options:
Increase **restriction** – pouch or GJ's resizing.

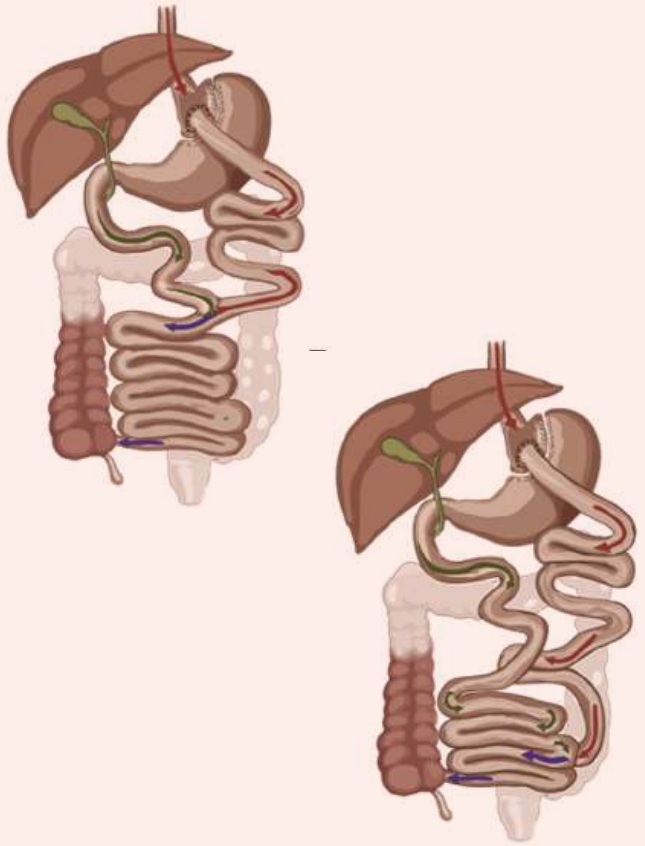
Increase **malabsorption** – distalization of GBP.

Distalization of GBP

- ↑ EWL & TWL at the cost of diarrhea and multiple nutrient deficiencies.



- There is no consensus on the **length** of **common limb** (50–300 cm).



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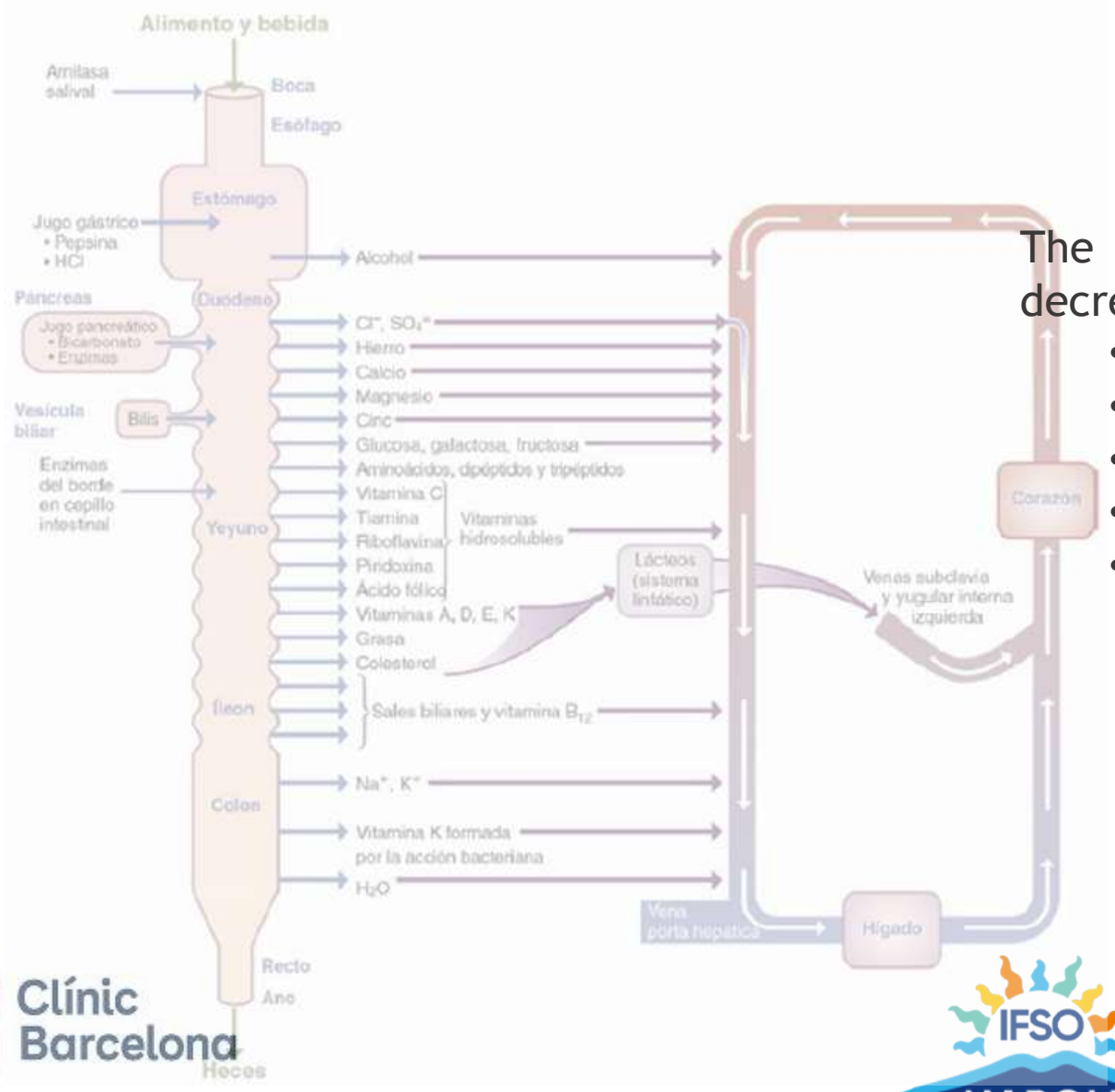
van der Burgh *et al*. Surg Obes Relat Dis. 2020 Mar;16(3):381-388.
Ghiassi S *et al*. Surg Obes Relat Dis. 2018 May;14(5):554-561.

DISCUSSION



The **rate of nutritional deficits** increases with decreasing common and total alimentary limb lengths.

- Proteins.
- Calcium & vitamin D.
- Iron.
- Liposoluble vitamins.
- Zinc, selenium.

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Table 3
Nutritional deficiencies

	n	Deficient n (%)	Range	LNL
Hemoglobin, mmol/L	44	29 (66)	F: 5.5–7.3 M: 5.6–8.2	F: 7.4 M: 8.4
Ferritin, µg/L	42	10 (24)	5–21	22
Vitamin B12, pmol/L	43	11 (26)	76–186	200
Vitamin B11, nmol/L	43	1 (2)	3.8	5.0
Albumin, g/L	42	18 (43)	12–41	32
Calcium, mmol/L	43	26 (60)	1.94–2.19	2.20
Phosphate, mmol/L	34	4 (12)	.5–.7	.8
Magnesium, mmol/L	34	3 (9)	.64–.65	.66
Selenium, µmol/L	16	13 (81)	.32–.57	.63
Zinc, µmol/L	30	19 (63)	5.7–9.0	9.2
Copper, µmol/L	5	0 (0%)	>9.1	8.8
Vitamin A, µmol/L	32	16 (50)	<.35–1.02	1.05
Vitamin B6, nmol/L	32	0 (0)	>63	25
Vitamin B1, nmol/L	32	0 (0)	>96	95
Vitamin D, nmol/L	42	21 (50)	<8–47	50
HPT, pmol/L	40	16 (40)	1.3–6.6	6.8*
Vitamin E, µmol/L	9	2 (22)	10.0–10.2	12.8
Vitamin K, nmol/L	5	4 (80)	<.16–.16	.22
Prolonged PTT, sec	26	11 (42)	16–27	15*

LNL = lower normal limit; F = female; M = male; HPT = hyperparathyroidism; PTT = prothrombin time.
* Upper normal limit.

van der Burgh *et al*. Surg Obes Relat Dis. 2020 Mar;16(3):381-388.

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Table 3
Proportion of patients with nutrition and vitamin levels below and above (PTH) normal limits after distalization using total alimentary limb length (TALL) of 400 to 450 cm

		Predistalization	6 mo	1 yr	2 yr	3 yr
	Low value	% Low (n)	% Low (n)	% Low (n)	% Low (n)	% Low (n)
Albumin, gm/dL	<3.2	2.1 (94)	16.7 (24)	14.3 (28)	9.5 (21)	21.1 (19)
Hemoglobin, g/dL	<11	5.2 (96)	4.4 (23)	17.2 (29)	18.2 (22)	15.8 (19)
Protein, gm/dL	<5	.0 (91)	.0 (24)	.0 (27)	.0 (21)	.0 (19)
Iron, ug/dL	<50	30.8 (13)	.0 (10)	21.7 (23)	27.8 (18)	27.3 (11)
Corrected Ca, mg/dL	<8.5	4.3 (94)	.0 (24)	7.4 (27)	14.3 (21)	21.1 (19)
B1, nM	<78	23.1 (13)	.0 (9)	5.6 (18)	11.8 (17)	16.7 (12)
B12, pg/mL	<200	7.7 (13)	9.1 (11)	5.0 (20)	.0 (19)	9.1 (11)
Vit-A, mcg/dL	<38	N/A	66.7 (3)	100.0 (5)	100.0 (3)	100.0 (1)
Vit-D, ng/mL	<30	40.0% (10)	55.6 (9)	66.7 (21)	60.0 (20)	76.9 (13)
	High value	% High (n)	% High (n)	% High (n)	% High (n)	% High (n)
PTH, pg/mL	>65	21.4 (14)	55.6 (9)	40.0 (20)	57.9 (21)	63.6 (11)

PTH = parathyroid hormone; Ca = calcium; Vit = vitamin; NA = not applicable.
Number of patients with lab values is listed in parenthesis for each time point and is the same for Tables 5 and 6.

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DISCUSSION

Tabla 3 – Necesidad de suplementación nutricional extra a la suplementación básica

	Cruce duodenal	
	n = 224	%
Necesidad global a más de 2 años	208	83,9%
Vitamina A	72	35,8%
Vitamina B12	17	8,5%
Vitamina D	120	59,7%
Vitamina E	6	3,0%
Vitamina K	3	1,5%
Calcio	71	35,3%
Hierro	82	40,8%
Cobre	11	5,5%
Zinc	16	8,0%
Albumina	1	0,5%
Ácido fólico	13	6,5%

Sorribas M et al. Cir Esp. 2022; 100(4): 202-208.

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CONCLUSIONS

- **One fifth** of patients undergoing BS **may not achieve satisfactory results** by weight loss standards.
- Conversion to surgical procedures with a **greater malabsorptive component** is a good option in cases of **insufficient weight loss**.
  - It also allows **resolution** of possible **associated GERD**.
- **Safe** surgical procedures in **elderly** patients.
  - Possible **metabolic sequelae** in the medium and long-term.
- Evaluation of these patients in **multidisciplinary** committees is necessary, as well as **individualized approach** and treatment.
- **Early detection** of these patients is important in order to try to propose additional therapeutic strategies to try to avoid it.

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