Survival is higher with sleeve gastrectomy than with gastric bypass patients (even though weight loss and comorbidity resolutions may be lower)

CON

Torsten Olbers MD, PhD
Professor of Metabolic surgery
Linköping University
SWEDEN

LINKÖPING UNIVERSITY

LUND UNIVERSITY

Region Östergötland
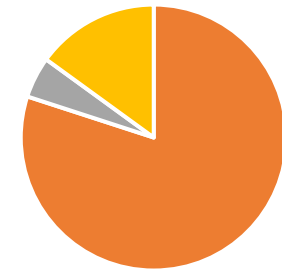
Potential conflicts of interest to report:

Advisory board-   *Johnson & Johnson, NovoNordisk*
Education activities-   *Johnson & Johnson, NovoNordisk, Sandoz*

Reimbursement to my academic institution

Case mix

■ RYGB   ■ SG   ■ Revisions

What is the problem with observational studies?

They suffer from bias:

- Are the patient groups similar?
- Same settings when performing the surgeries?
- Are the expertise similar in doing the procedures?

I.e, we don't really know if we can trust data, we just observe an association for which bias very well can be the explanation

How should this question be properly addressed?

In a large sized multicenter randomized clinical trial

n= 1754

Scandinavian Obesity Surgery Registry (SOReg)

- National Quality registry for bariatric surgery, since 2007.

- SOReg has a high validity and covers >98% of bariatric surgery in Sweden.

SOReg-Norway has identical variables, started in 2015 and covers 88% of bariatric surgery in Norway.

Bypass Equipoise Sleeve Trial (BEST)

- Randomized Clinical Trial- SG vs. RYGB.

- SOReg as case report form

- Co-primary endpoints at 5 years

    - Weight-loss (non-inferiority)
    - Substantial adverse events (superiority)

Trial recruited between October 2015 to March 2022.

Demography, BEST and Non-BEST

	BEST		Non-BEST
	SG	RYGB	
Number	788	768	
women	587 (74%)	561 (73%)	
Age, years	42.6 (11.4)	42.8 (11.1)	
BMI, kg/m^2	40.7 (3.7)	40.9 (3.7)	
Current medical treatment	448 (57%)	433 (56%)	
Sleep apnea	105 (13%)	100 (13%)	
Hypertension	227 (29%)	232 (30%)	
Diabetes	96 (12%)	110 (14%)	
Dyspepsia	30 (4%)	37 (5%)	
Dyslipidemia	104 (13%)	99 (13%)	
Depression	116 (15%)	99 (13%)	
Smoking (current)[a]	66 (8%)	86 (11%)	
Prior DVT or PE [b]	24 (3%)	14 (2%)	

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Can we generalize data from BEST?

- Comparing data in BEST and in non-BEST patients in SOReg.

- Patients undergoing primary SG or RYGB in Sweden between April 20th 2016 - March 31th 2022.

Demography, BEST and Non-BEST

	BEST		Non-BEST	
	SG	RYGB	SG	RYGB
Number	788	768	8797	11,120
women	587 (74%)	561 (73%)	7028 (80%)	8574 (77%)
Age, years	42.6 (11.4)	42.8 (11.1)	40.6 (11.1)	40.7 (11.5)
BMI, kg/m²	40.7 (3.7)	40.9 (3.7)	40.5 (3.7)	41.3 (3.8)
Current medical treatment	448 (57%)	433 (56%)	4499 (51%)	6662 (60%)
Sleep apnea	105 (13%)	100 (13%)	737 (8%)	1266 (11%)
Hypertension	227 (29%)	232 (30%)	1870 (21%)	2866 (26%)
Diabetes	96 (12%)	110 (14%)	96 (12%)	1551 (14%)
Dyspepsia	30 (4%)	37 (5%)	451 (5%)	1758 (16%)
Dyslipidemia	104 (13%)	99 (13%)	573 (7%)	1148 (10%)
Depression	116 (15%)	99 (13%)	1510 (17%)	2025 (18%)
Smoking (current)[a]	66 (8%)	86 (11%)	890 (11%)	1089 (10%)
Prior DVT or PE [b]	24 (3%)	14 (2%)	174 (2%)	264 (2%)

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Adverse Events, BEST vs Non-BEST

	BEST		Non-BEST
	SG	RYGB	
Number	788	768	
Clavien-Dindo IIIb or more[a]	14 (2%)	23 (3%)	
Any Adverse event[a]	33 (4%)	48 (6%)	
Mortality 30 days	0 (0%)	0 (0%)	
Mortality 90 days	0 (0%)	0 (0%)	
Re-admitted within 30 days [a]	22 (3%)	32 (4%)	
Re-operated within 30 days [a]	14 (2%)	25 (3%)	

Adverse Events, BEST vs Non-BEST

	BEST		Non-BEST	
	SG	RYGB	SG	RYGB
Number	788	768	8,797	11,120
Clavien-Dindo IIIb or more[a]	14 (2%)	23 (3%)	148 (2%)	333 (3%)
Any Adverse event[a]	33 (4%)	48 (6%)	411 (5%)	767 (7%)
Mortality 30 days	0 (0%)	0 (0%)	0 (0%)	4 (0.0003%)
Mortality 90 days	0 (0%)	0 (0%)	2 (0.0002%)	6 (0.0005%)
Re-admitted within 30 days [a]	22 (3%)	32 (4%)	317 (4%)	735 (7%)
Re-operated within 30 days [a]	14 (2%)	25 (3%)	150 (2%)	355 (3%)

Conclusion

If there is any difference in mortality it appears to be limited and should not, in our opinion, be a main determinant for choosing either of procedures.

Similar outcomes in By-Band-Sleeve from the UK.