

Gevolgen van bariatrische heekunde op lange termijn

Avondcolloquia 'Nevenwerkingen'

Kjell Fierens

3 maart 2021



Onschuldige bariatrische heelkunde?

Moderators

Ereprof. dr. Antony Verbaeys | Dr. Annie Goeman

Programma

20.30 uur NASH (Nonalcoholic Steatohepatitis) en bariatric

Synergie of antagonisme?

Prof. dr. Anja Geerts

21.10 uur Depleties na bariatric en postprandiale hypoglycemie

Prof. dr. Yves Van Nieuwenhove

21.50 uur Gevolgen van bariatrische heelkunde op lange termijn

Dr. Kjell Fierens

Schuldig?



Next-Day-Surgery

[Home](#) > [Info](#) > [Patient Information](#) > [Next-Day-Surgery](#)

For our patients who live far away, or for anyone who wants to save time and money, we offer a special "Next-Day-Surgery" Service: you can have your consultation and treatment on consecutive days. At no additional costs!

Schuldig?

- Begrijpelijke achterdocht
 - wellness clinic
 - indicaties
 - complicaties
- Wat zijn de cijfers?
- Afweging voordelen >< nadelen



Risico-afweging

- ‘Wat als ik de operatie doe vs niet’
- Risico van obesitas (algemeen en bv bij zs...)
- Vergelijking onco
 - gelijklopende problemen: LAR (dumping...), lekkages, mortaliteit, recidieve,...
- Metabole heelkunde (geen schoonheidsoperatie!)
- Omslagpunt + > -



- Gastric Bypass
- Sleeve gastrectomie



- Scopinaro
- BP-DS
- Mason



- ESG
- Banded bypass
- Banding (Australie)

Compleet pakket

- Chirurgie
- Dietaire begeleiding
 - Dietist en endocrino
 - Nieuwe eetgewoontes en goede voedingstoestand
- Psychologische en levensstijl aanpassingen
 - Gewichtscontrole = voeding én gedrag
- Screening en FU !!!!!!!

Cherry picking

- Interne herniatio: wat te doen?
- Papil bereikbaarheid - galwegproblemen
- Zwangerschap
- Reflux na sleeve
- Gewichtstoename

Positieve effecten

Peterli, R., et al., *Effect of Laparoscopic Sleeve Gastrectomy vs Laparoscopic Roux-en-Y Gastric Bypass on Weight Loss in Patients With Morbid Obesity: The SM-BOSS Randomized Clinical Trial*. JAMA, 2018. **319**(3): p. 255-265.

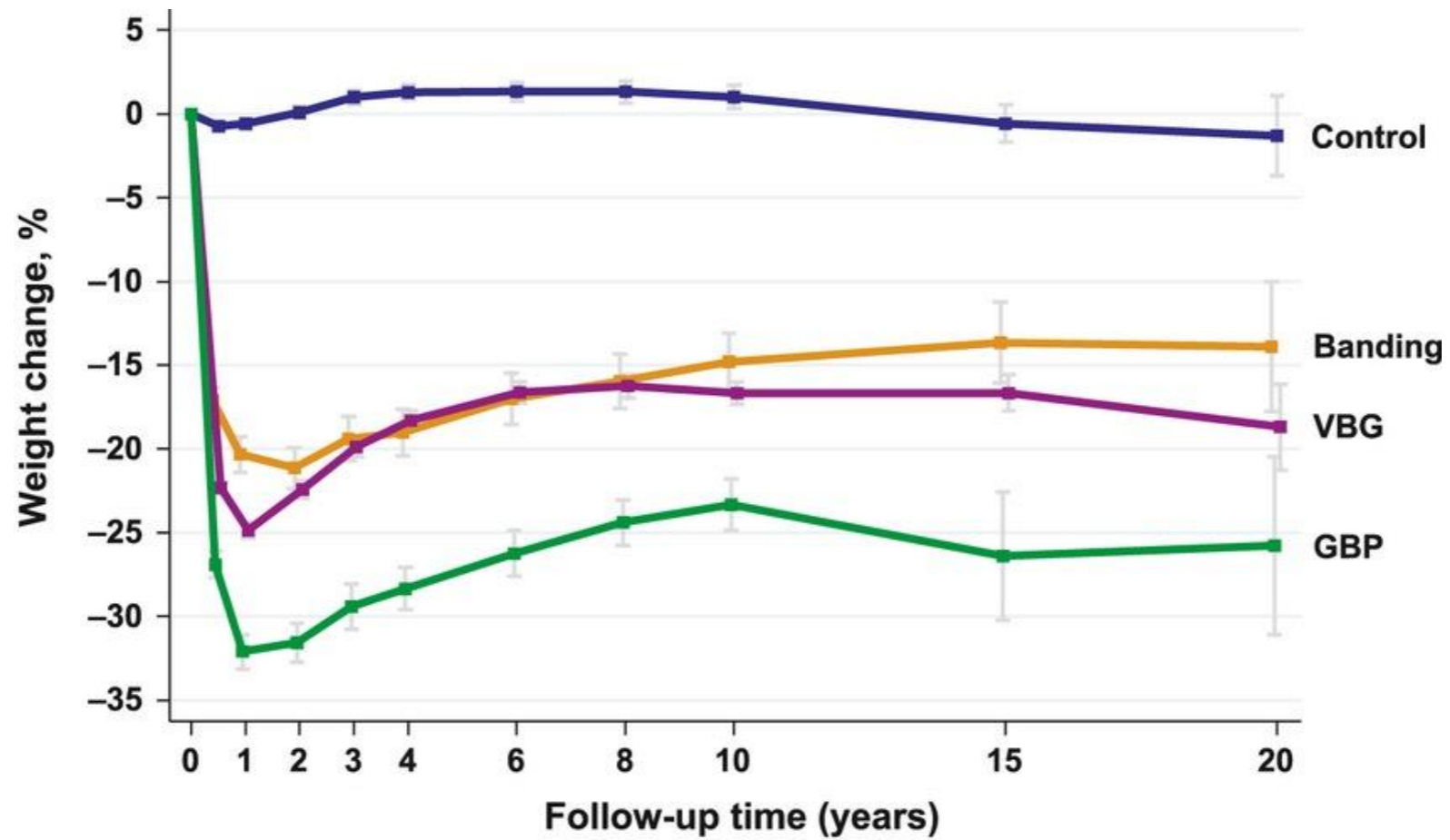
Salminen, P., et al., *Effect of Laparoscopic Sleeve Gastrectomy vs Laparoscopic Roux-en-Y Gastric Bypass on Weight Loss at 5 Years Among Patients With Morbid Obesity: The SLEEVEPASS Randomized Clinical Trial*. JAMA, 2018. **319**(3): p. 241-254.

Buchwald, H., et al., *Bariatric surgery: a systematic review and meta-analysis*. JAMA, 2004. **292**(14): p. 1724-37.

Effects of Bariatric Surgery on Mortality in Swedish Obese Subjects

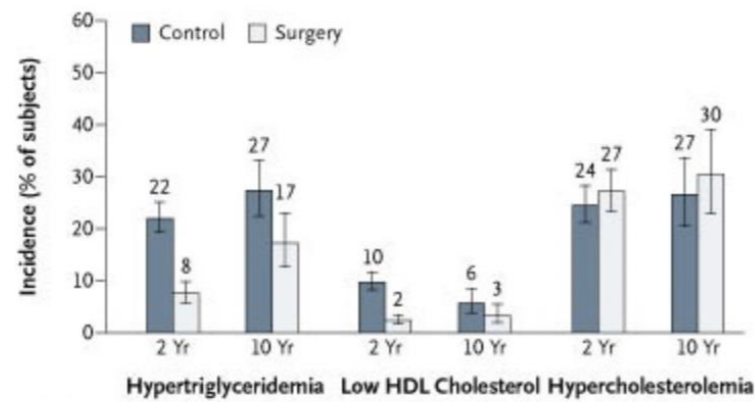
Lars Sjöström, M.D., Ph.D., Kristina Narbro, Ph.D., C. David Sjöström, M.D., Ph.D., Kristjan Karason, M.D., Ph.D., Bo Larsson, M.D., Ph.D., Hans Wedel, Ph.D., Ted Lystig, Ph.D., Marianne Sullivan, Ph.D., Claude Bouchard, Ph.D., Björn Carlsson, M.D., Ph.D., Calle Bengtsson, M.D., Ph.D., Sven Dahlgren, M.D., Ph.D., et al., for the Swedish Obese Subjects Study

Positieve effecten

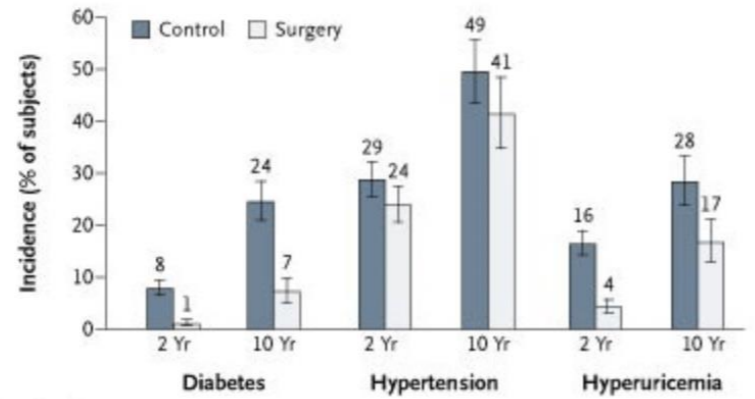


No. examined

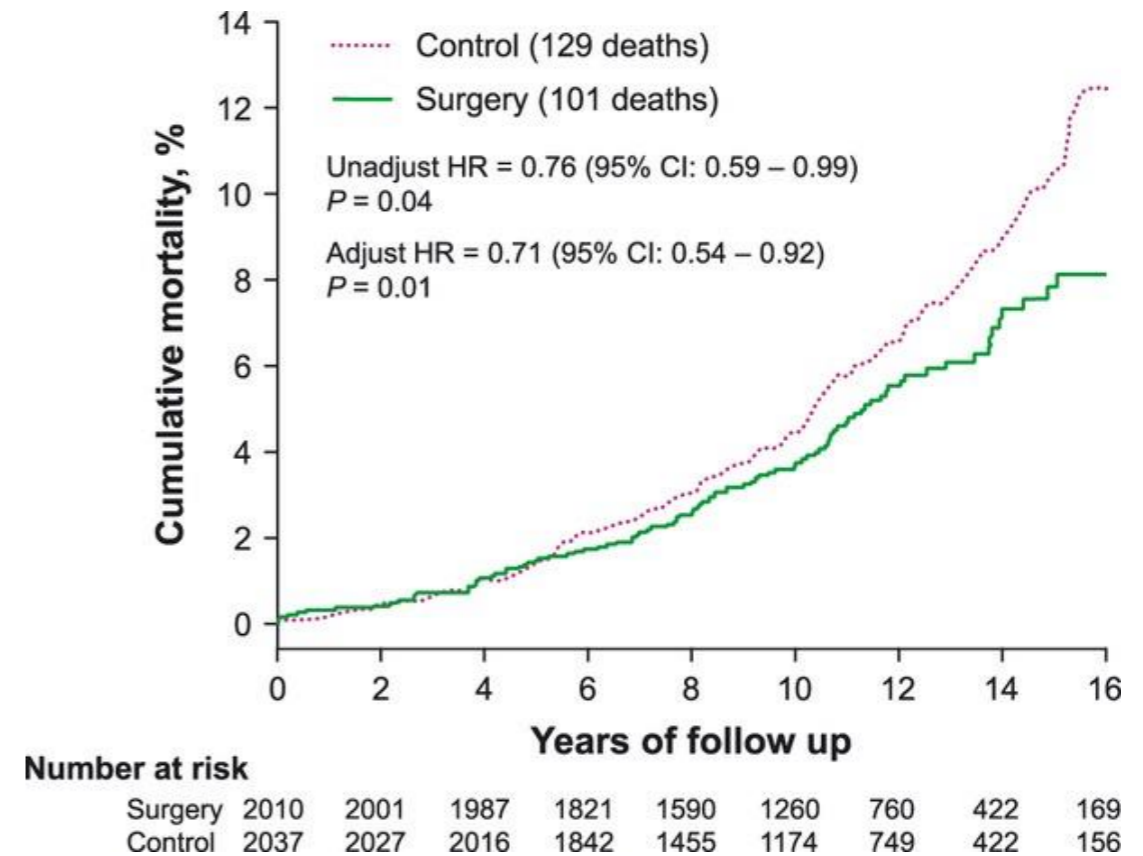
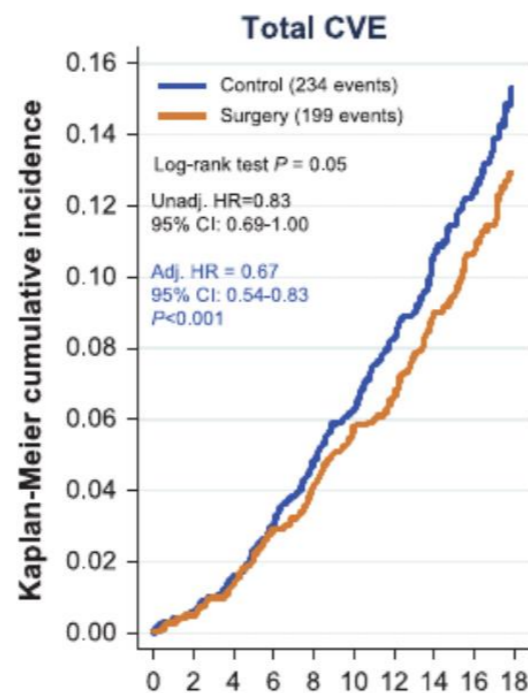
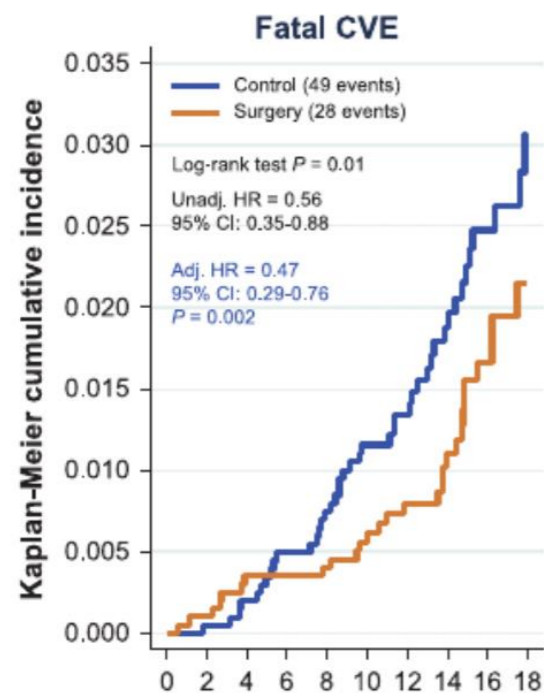
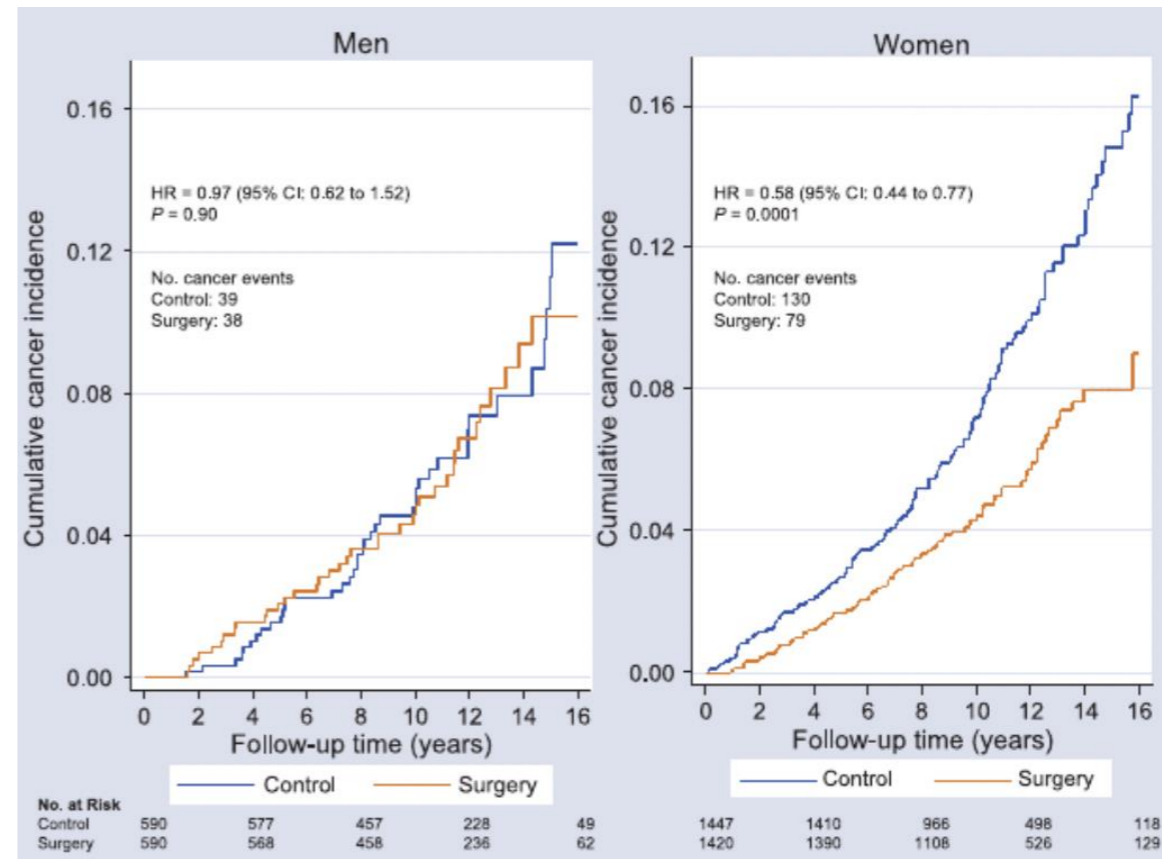
| | | | | | | |
|---------|------|------|------|------|-----|-----|
| Control | 2037 | 1490 | 1242 | 1267 | 556 | 176 |
| Banding | 376 | 333 | 284 | 284 | 150 | 50 |
| VBG | 1369 | 1086 | 987 | 1007 | 489 | 82 |
| GBP | 265 | 209 | 184 | 180 | 37 | 13 |



| No. of subjects | Control | Surgery | Odds ratio | 95% CI | P value |
|----------------------|---------|---------|------------|-----------|---------|
| Hypertriglyceridemia | 801 | 731 | 0.29 | 0.21-0.41 | <0.001 |
| Low HDL Cholesterol | 281 | 225 | 0.61 | 0.39-0.95 | 0.03 |
| Hypercholesterolemia | 1174 | 1293 | 0.21 | 0.14-0.32 | <0.001 |
| | 440 | 431 | 0.57 | 0.29-1.15 | 0.12 |
| | 596 | 504 | 1.27 | 0.95-1.69 | 0.11 |
| | 188 | 135 | 1.16 | 0.69-1.95 | 0.57 |



| No. of subjects | Control | Surgery | Odds ratio | 95% CI | P value |
|-----------------|---------|---------|------------|-----------|---------|
| Diabetes | 1402 | 1489 | 0.14 | 0.08-0.24 | <0.001 |
| Hypertension | 539 | 517 | 0.25 | 0.17-0.38 | <0.001 |
| Hyperuricemia | 770 | 623 | 0.78 | 0.60-1.01 | 0.06 |
| | 279 | 215 | 0.75 | 0.52-1.08 | 0.13 |
| | 1017 | 1044 | 0.22 | 0.15-0.31 | <0.001 |
| | 382 | 342 | 0.49 | 0.34-0.71 | <0.001 |

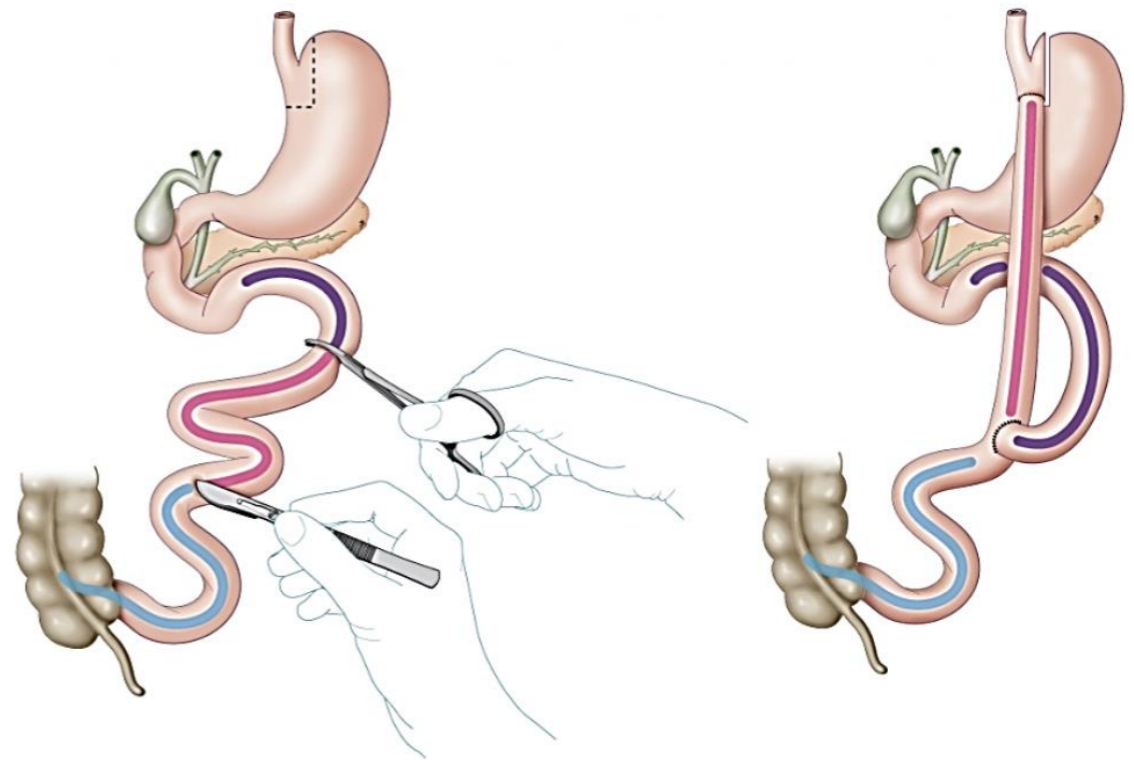


Problemen eigen aan...

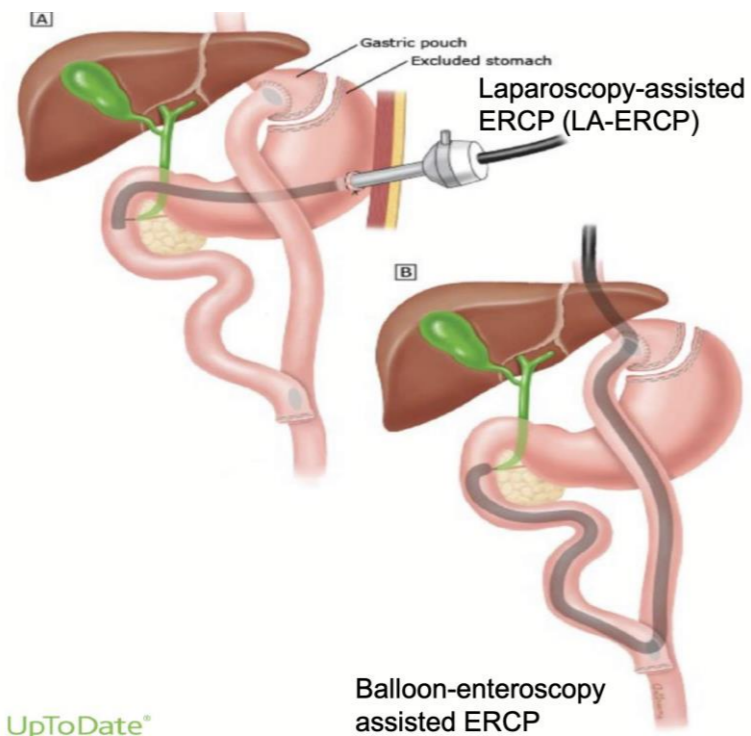
- Procedure (ERCP na bypass, reflux na sleeve)
- Situatie (zwangerschap)
- Techniek (interne herniatio)
- Persoon zelf & screening (MD overleg)

Galwegproblematiek

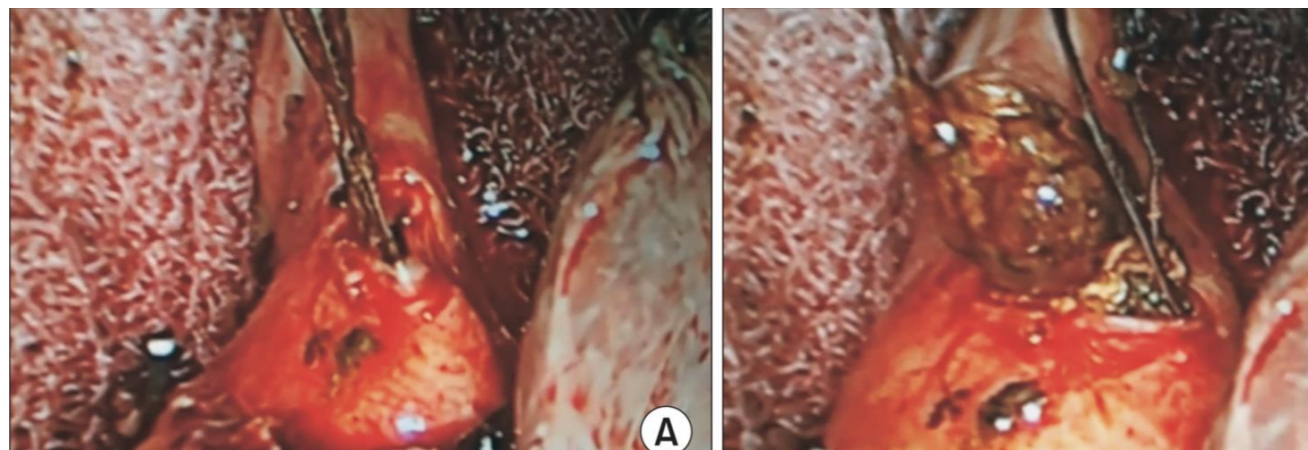
- Galstenen na vermagering
- 4/10 regel
- 16% symptomatisch
- Preop te checken
- Standaard CCE?
- Y-lis procedures



Galwegproblematiek

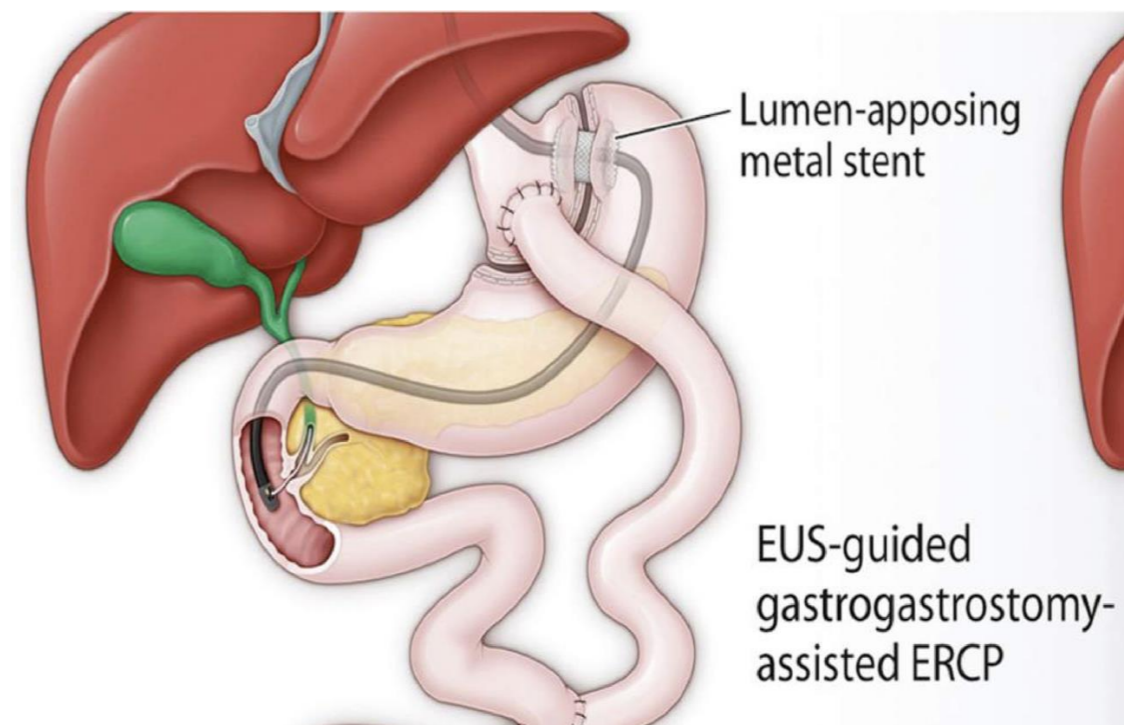


- Double balloon enteroscopie
- Laparoscopisch geassisteerd ERCP
- Laparoscopische choledochotomie
- LAMS
- Percutane Transhepatische Cholangiografie



Galwegproblematiek - LAMS

- **L**umen **A**pposing **M**etal **S**tent
- Gefaseerde procedure
- Goede resultaten
- GG fistula?



Galwegproblematiek - PTC



Percutane **T**ranshepatische **C**holangiografie met angioplastie ballon / dormiacatheter

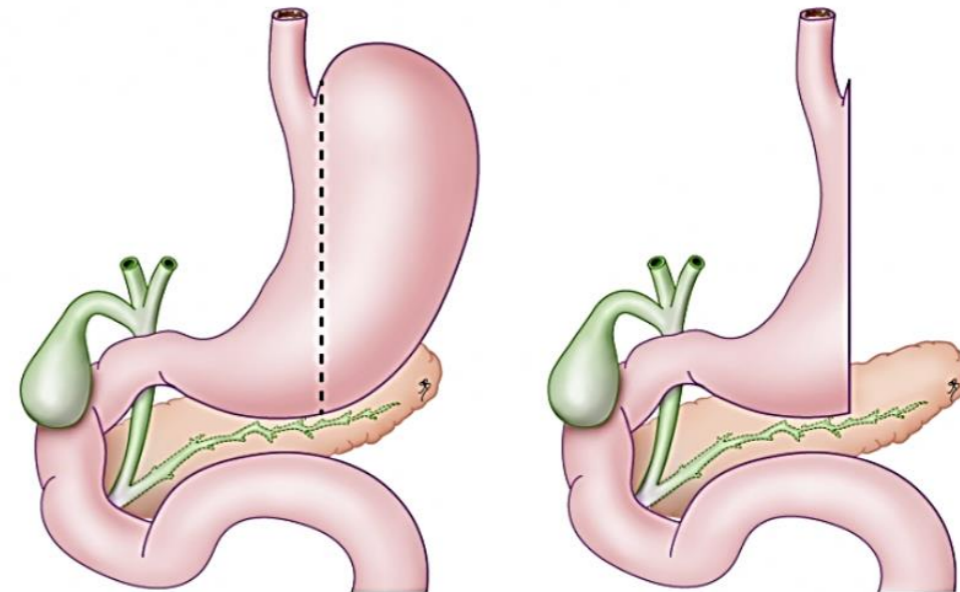
Reflux

Barrett's esophagus after sleeve gastrectomy: a systematic review and meta-analysis



Bashar J. Qumseya, MD, MPH,¹ Yazan Qumsiyeh, MD,² Sandeep A. Ponniah, MD,³ David Estores, MD,¹ Dennis Yang, MD,¹ Crystal N. Johnson-Mann, MD,⁴ Jeffrey Friedman, MD,⁴ Alexander Ayzengart, MD, MPH,⁴ Peter V. Draganov, MD¹

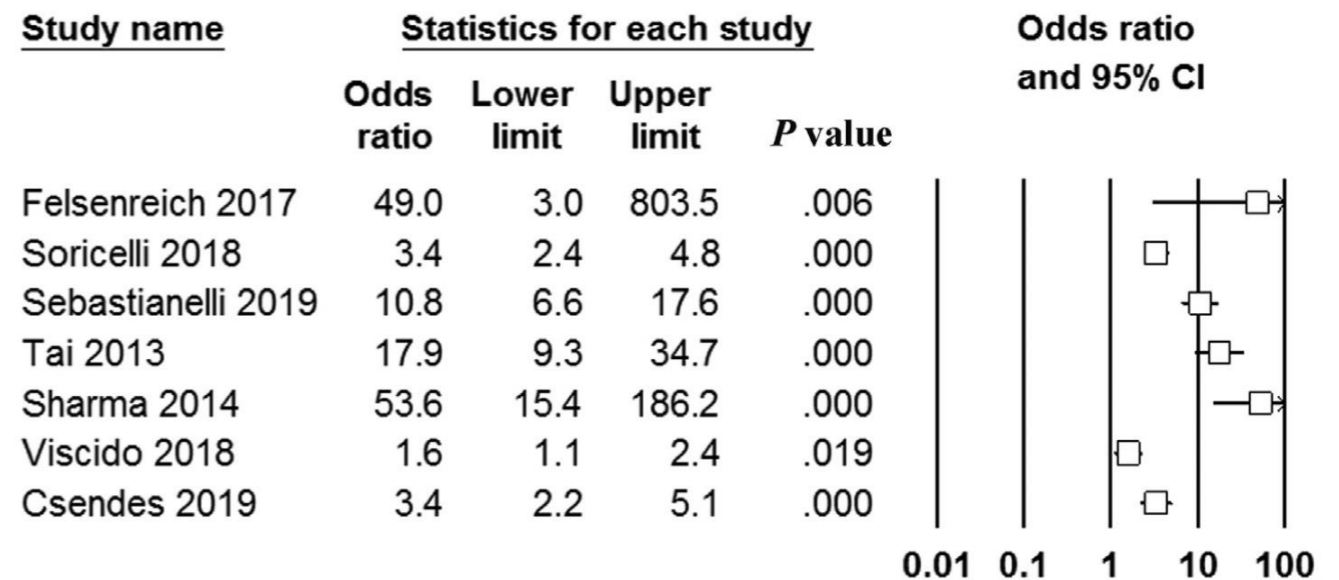
- Gastrointest Endoscopy 2021
- 680 sleeve gastrectomieën
- Preop Barrett: 1 pt
- Postop Barrett: overall kans **11,6%**



Reflux

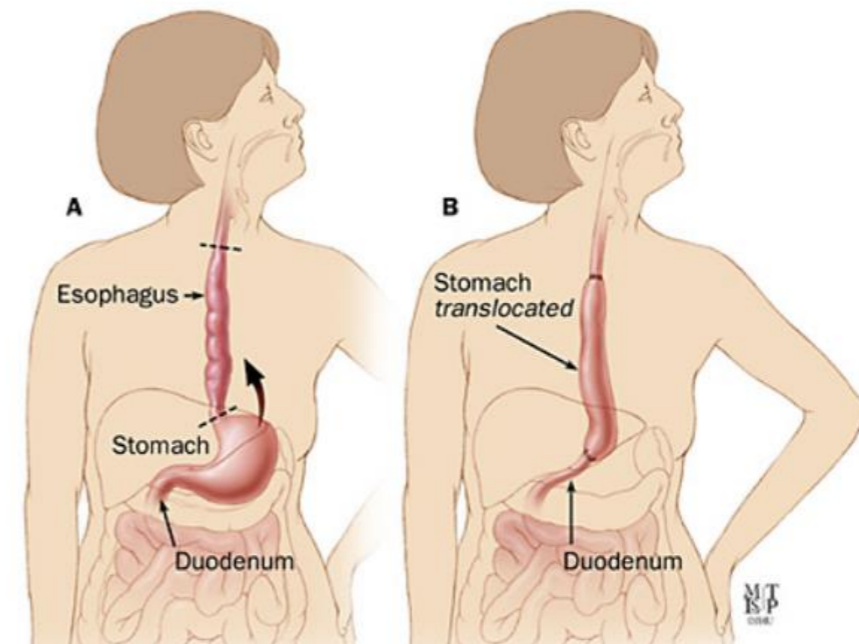
| Proposed mechanisms for increased GERD after SG | Reference |
|---|---|
| Hypotension of the lower esophageal sphincter | Braghetto et al. [48] |
| Blunting of the angle of His | Himpens et al. [49] |
| Decreased gastric compliance and volume (leading to increased gastric pressure) | yehoshua et al. [50] |
| Decreased gastric emptying | Himpens et al. [49], Melissas et al. [32] |
| Decreased plasma ghrelin (dysmotility) | Nahata et al. [51] |
| Gastric sleeve shape | Lazoura et al. [52] |
| Increase in hiatal hernia | Baumann et al. [53] |
| Neofundus | Himpens et al. [40] |

Significante stijging **GERD** (1,6 - 49 OR)



Reflux - Barrett

- Typisch vanaf 3j postop
- Geen verschil volgens klachten !!
- Wat met:
 - PPI
 - Postop screening voor BE
 - HK voor CA?
 - ESG als alternatief?




Zwangerschap

- > 80 % bariatrische procedures bij vrouwen
- 1/2 in reproductieve levensperiode
- Gebruikte procedure belangrijk:
 - Bypass: IH
 - Gband: openen voor nausea en braken
 - Malabs: verminderde absorptie OAC

Obesitas en Zwangerschap







Effecten op fertiliteit en conceptie

- Gewijzigd metabolisme van geslachtshormonen (ook bij mannen)
- Hoger risico op polycysteus-ovariumsyndroom
- Hoger risico op anovulatoire infertiliteit
-  Verhoogd percentage miskramen en percentage euploïde miskramen
- Gewijzigde spermatelling, -concentratie, -motiliteit en -morfologie (bij mannen)



Door heelkunde

Effecten op moeder en foetus

- Hoger risico op overmatige gewichtstoename tijdens de zwangerschap en gewichtstoename postpartum
- Hoger risico op zwangerschapsdiabetes en insulineresistentie 
- Hoger risico op hypertensieve aandoeningen van zwangerschap 
- Problemen tijdens de bevalling en geboorte 
- Lagere kans op vlotte borstvoeding
- Hoger risico op symptomen van depressie
- Hoger risico op preterme geboorte en hogere zuigelingenmortaliteit 
- Verhoogd geboortegewicht en hoger risico op macrosomie 
- Hoger risico op congenitale afwijkingen 

Maar wel :
IUGR
SGA

Geen hogere frequentie na BHk
Foliumzuur supplementatie (800 mcg) bij GBypass

Cocktail

Fertiliteit na heekunde hoger!!

- Verminderde absorptie OAC
- Gewichtsverlies



Zwangerschap

- Timing zwangerschap na chirurgie: **12-24 m** wachten
- Parent et al, Bariatric Surgery and Women of Childbearing age, timing between an operation and birth, and associated Perinatal Complications, JAMA Surg 2017
 - 1850 ptn, cohort, binnen de twee jaar resulterend in:
 - **Meer prematuriteit**
 - **Meer neonato opnames**
 - **Meer small for gestational age status**
- Zwangerschap snel na chirurgie: = **totaal WL**

Zwangerschap

- Meten is weten!
- Nagaan van:
 - Contraceptie
 - Seksualiteit
 - Levenskwaliteit
 - Voedingsgewoontes,
 - Fysieke activiteit
 - ...



Zwangerschap

✓ Healthy pregnancies after bariatric surgery



Contraception

- Postpone pregnancy until weight has stabilised
- Avoid oral contraception and encourage long-acting reversible contraceptive methods such as IUD



Diet

- Reduce quick-absorbing carbohydrates and opt for protein and low glycaemic index alternatives
- Avoid caffeine and alcohol
- Frequent, smaller meals



Surgical issues

- Inflate and deflate LAGB according to hyperemesis, GWG, and fetal growth
- Assess for internal herniation when abdominal pain is reported and treat promptly



Diabetes

- Avoid OGTT due to risk of dumping syndrome
- Monitor HbA1c every trimester if personal history of diabetes or risk factors
- CGM or seven point CBG between 24 and 28 weeks



Supplements

- Vit D >40mcg
- Vit E 15mg
- Vit K 90-120µg
- Thiamine >12mg
- Zinc 8-15mg per 1mg copper
- Calcium 1200-1500mg
- Vit A 5000IU (B-carotene)
- Folic acid 0.4mg, 4-5mg for GDM/obesity
- Iron 45-60mg
- Copper 2mg
- Selenium 50µg



Mental health

- Screen for substance abuse, anxiety, or other mental health disorders
- Offer follow up during and after pregnancy



Fetal monitoring

- Monitor fetal growth every trimester
- Assess for congenital anomalies or developmental problems such as intracranial bleeds



Gestational weight gain

- Monitor GWG according to IOM guidelines and screen for associated complications if necessary



Nutrient levels

- Check serum indices (micronutrients, protein and albumin, FBC, INR) after surgery, preconception, and every trimester in pregnancy and supplement as necessary



Breastfeeding

- Breast milk is not compromised after surgery and breastfeeding is recommended
- Monitor maternal micronutrients during lactation

Supplementatie! (cave vit A)

Labo monitoring en close FU

Geen GTT na RYGB

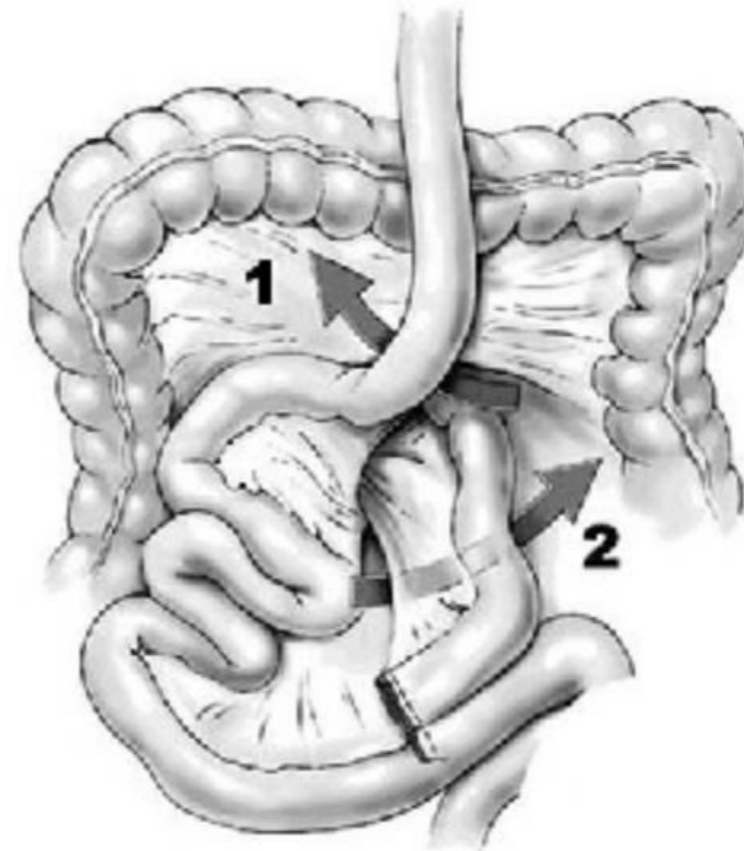
Bij buikpijn:

- Laagdrempelige CT

- HK consult

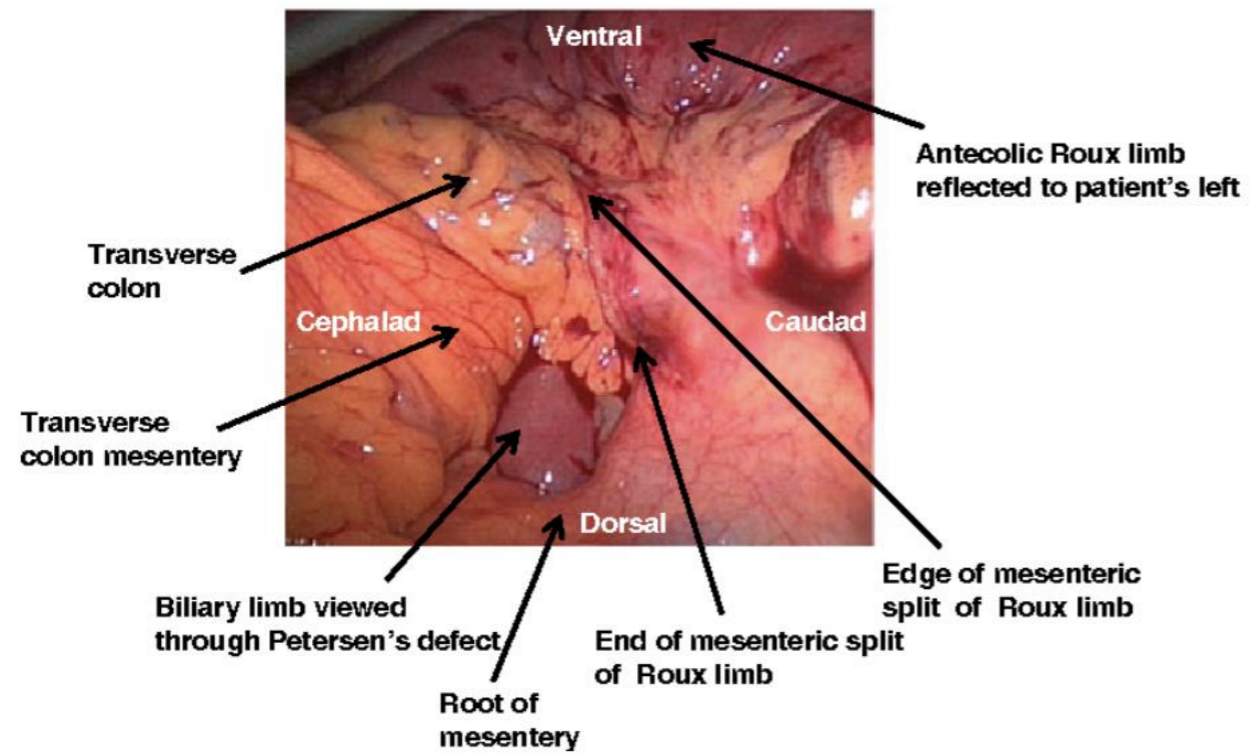
Interne herniatio

- Klinische diagnose
- 9-14 procent
- Enkel na Y-lis constructies
- BV enkel bevestigen, niet uitsluiten !!!
- Voornamelijk E-E

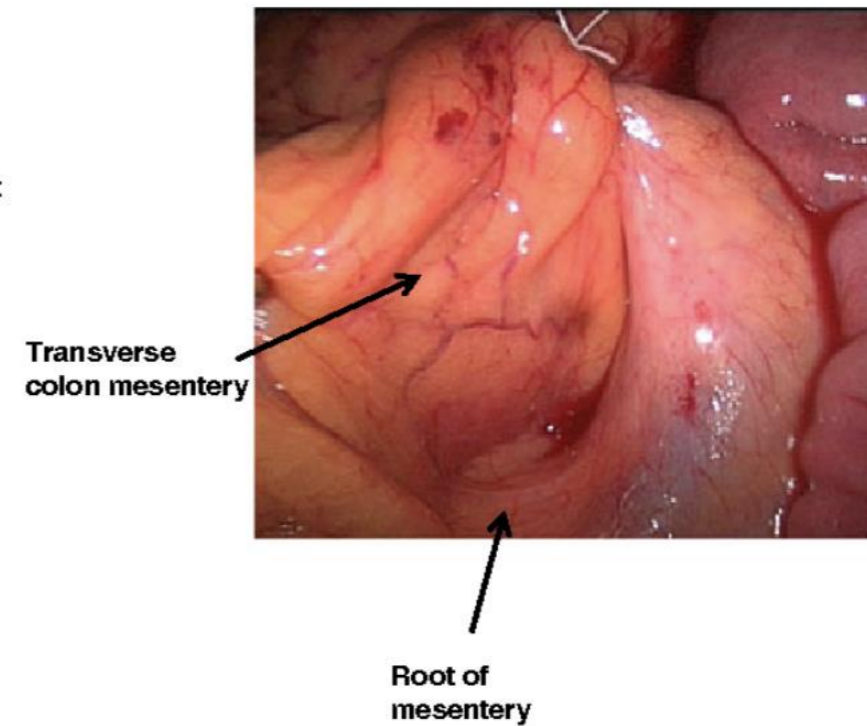


Interne herniatie

a. Petersen's defect viewed from patient's right

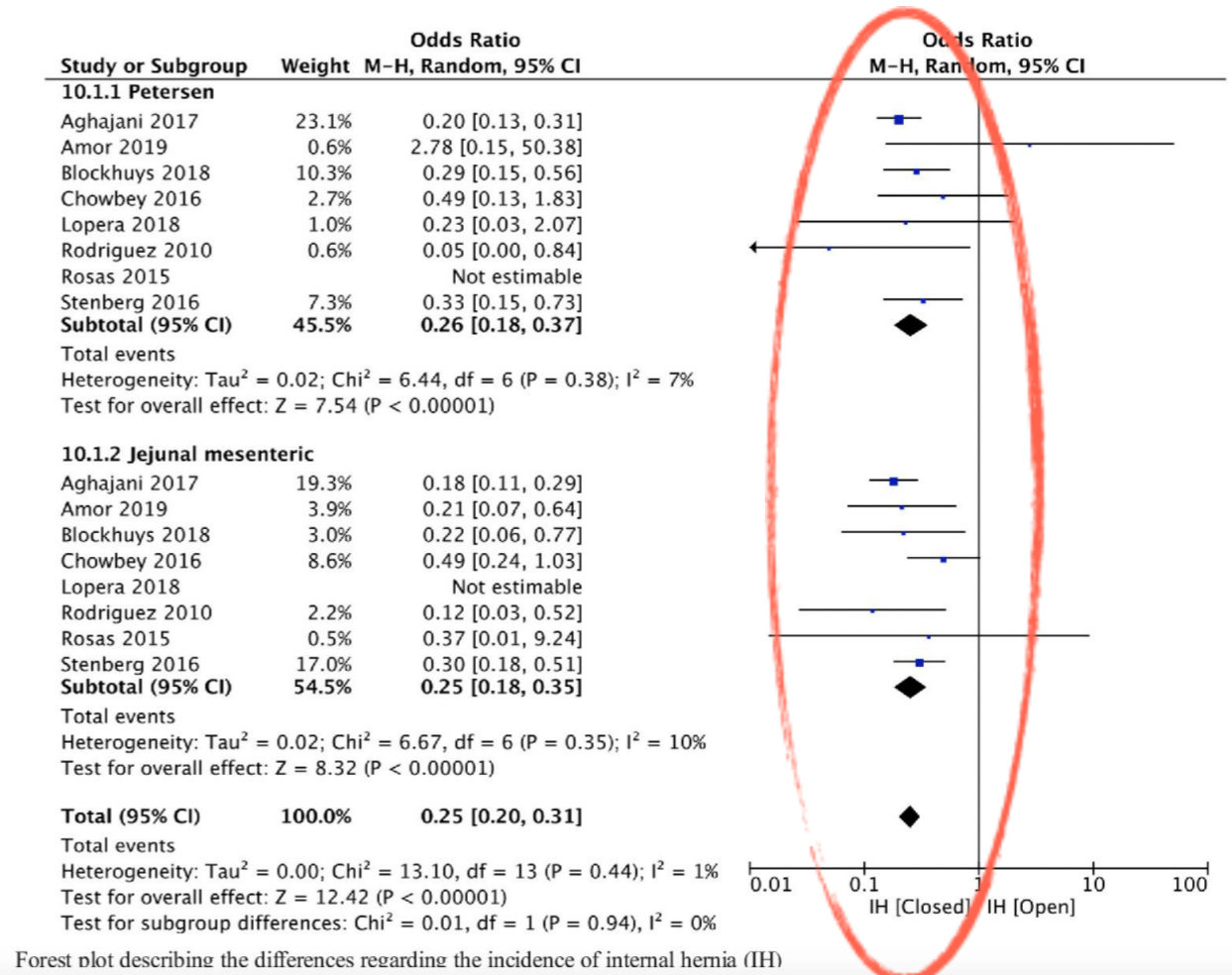


b. Partial closure of Petersen's defect



Interne herniatie

- Magouliotis et al. (Obesity surgery 2020)
- Pro sluiten mesobressen
- Meer E-E dan Petersen
- Cave: Meer kans op SBO kinking E-E?



Interne herniatio

- Herkenbaarder dan vroeger
- Kliniek
- To close or not...?
- Cave!!
 - onvolledig gesloten
 - te zekere chirurg
- Laagdrempeiligheid!

Gewichtstoename



Weight Regain and Insufficient Weight Loss After Bariatric Surgery: Definitions, Prevalence, Mechanisms, Predictors, Prevention and Management Strategies, and Knowledge Gaps—a Scoping Review

Walid El Ansari^{1,2,3}  · Wahiba Elhag⁴

Received: 19 September 2020 / Revised: 1 December 2020 / Accepted: 7 December 2020

Definition

WR

Using EWL%
Using nadir weight %
Using nadir weight kg
Using maximum WL
Using pre-surgery weight
Using any WR after remission
Using any WR
Using BMI

> 25% EWL from nadir [17–19]
≥ 10% [8, 20] or > 15% of nadir weight [8, 9, 21, 22]
≥ 10 kg from nadir [8, 21–23]
≥ 10% [8, 24], ≥ 20 [8, 25] or ≥ 25 [8, 26] of maximum WL
≥ 10% WR of pre-surgery weight [8, 27]
Any WR after T2DM remission [28]
Any WR [29]
≥ 5 BMI kg/m² points from nadir [30]
Increase in BMI > 35 kg/m² after successful WL [31]
EWL of < 50% at 18 months [16]

IWL

Using EWL%

Prevalence^a

WR

Post-LAGB (38%) [32]; post-LSG (27.8%) [33]; post-RYGB (3.9%) [34]

IWL

After LSG (32–40%) [17, 35]; after RYGB, OAGB, and LSG combined (20%) [36]

Gewichtstoename - oorzaken

Causes

| | |
|---------------------------|--|
| Hormonal/metabolic | Increase in ghrelin, decrease in peptide YY and GLP-1, post-bariatric hypoglycemia, role of leptin is unclear [24, 40–49] |
| Dietary non-adherence | Increase caloric intake with time, dietary non-adherence/food indiscretion, grazing, lack of nutritional follow-up [13, 32, 50–56] |
| Physical inactivity | Non-compliance, sedentary behavior, presence of barriers to exercise [51, 57–61] |
| Mental health | Depression, multiple psychiatric conditions, binge eating disorder, loss of control over eating |
| Anatomic surgical failure | |
| LAGB | Pouch distension [69] |
| LSG | Dilatation of gastric pouch [70–77] |
| RYGB | Dilatation of gastric pouch, dilatation of gastrojejunostomy stoma outlet, gastrogastic fistula |

Gewichtstoename - predictief

- Leeftijd (older age)
- Man
- Hoog preop BMI
- Comorb (T2DM, AHT, OSAS)
- Geestelijke gezondheid...

Gewichtstoename - behandeling

Prevention and management

Behavioral

Dietary

Pharmacological

Cognitive behavioral therapy, remote acceptance-based behavioral intervention, lifestyle counseling [87–90]

Counseling with dietitian, structured dietary intervention [91–94]

FDA approved: phentermine, phentermine–topiramate extended release, liraglutide, bupropion/naltrexone

Off label: metformin, topiramate, zonisamide, bupropion [95–98]

Surgical (management only)

After failed LAGB

After failed LSG

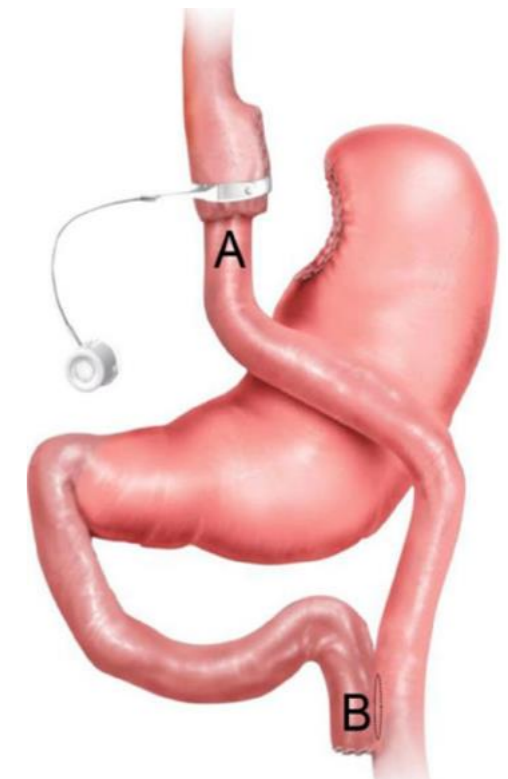
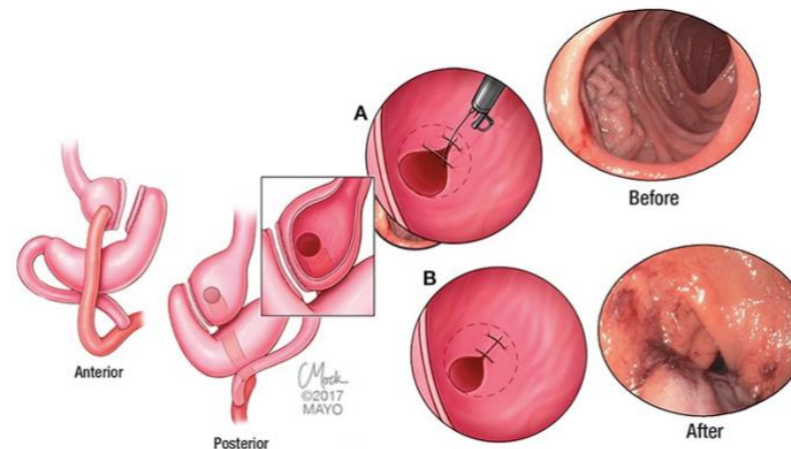
After failed RYGB

Conversion to LSG, RYGB, BPD/DS [99]

Conversion to RYGB, BPD/DS [17]

Conversion to DRYGB or to BPD/DS; or revision of gastric pouch and anastomosis, revision with gastric band [100]

- Medicatie
- Banded bypass
 - Tweetraps
 - Cave band complicaties
- Vernauwing GE (endoscopisch)
- **Psy en dietaire begeleiding !**



Psychology is king

- Preop neiging tot ondergecontroleerd gedrag (bv slechte impuls controle)

- MMPI-2-RF

- Resulteert in :

- Slechter WL outcome

(minder dan 50%)

- Slechte neiging tot opvolging

> [Surg Obes Relat Dis](#). Sep-Oct 2015;11(5):1171-81. doi: 10.1016/j.soard.2015.03.020.
Epub 2015 Apr 2.

Using presurgical psychological testing to predict 1-year appointment adherence and weight loss in bariatric surgery patients: predictive validity and methodological considerations

Ryan J Marek ¹, Anthony M Tarescavage ², Yossef S Ben-Porath ², Kathleen Ashton ³, Julie Merrell Rish ³, Leslie J Heinberg ³

* Minnesota Multiphasic Personality Inventory-2-Restructured Form

Psychology is king

Journal of Psychiatric Research 120 (2020) 124–130



Contents lists available at [ScienceDirect](#)

Journal of Psychiatric Research

journal homepage: www.elsevier.com/locate/jpsychires



Examining emotion-, personality-, and reward-related dispositional tendencies in relation to eating pathology and weight change over seven years in the Longitudinal Assessment of Bariatric Surgery (LABS) study



Jason M. Lavender^{a,b,c,*}, Wendy C. King^d, Melissa A. Kalarchian^e, Michael J. Devlin^f,
Amanda Hinerman^d, John Gunstad^g, Marsha D. Marcus^h, James E. Mitchellⁱ

- Ecological Momentary Assessment
- Affect/Temperament/Reward gerichte neigingen: groter risico voor minder optimale resultaten na bariatrische heekunde !!
- Screeningstool?

Samenvattend

- Pos >>> Neg kanten aan bar HK
- Screening, selectie, tailoring en FU van enorm belang
- Deel van behandelingsplan
- Kritisch voor bepaalde procedures

Niet onschuldig doch toch **vrijspraak !!!**