Bariatric Surgery at CMDHB

Richard Babor

AUCKLAND | WEIGHT LOSS | SURGERY

My Background

Post-fellowship upper GI & bariatric surgery (3 yrs)

Full range bariatric surgery (bypass, sleeve, band)

Upper GI and HPB oncologic surgery

Developing bariatric surgery at CMDHB

Private practice with Grant Beban, multidisciplinary team

History of Bariatric Surgery at CMDHB

1980s	Small numbers of VBGs
	Included David Lange
1990s	Small number of open Gastric Bypasses
2000s	Laparoscopic Sleeve Gastrectomy
	Multidisciplinary approach
	Larger numbers

BMI > 40 in Auckland DHBs

	Female	*Male*	*Total*
Auckland	4863	3339	8202
Waitemata	5065	3330	8395
Counties	5693	4645	10338
NZ total	*44612*	*31451*	*76063*

2006-7 Data for CMDHB

Overweight or Obese (BMI>25)	66%
Obese (BMI>30)	33%

How is Public different from Private?

PATIENTS

Larger

More co-morbidities

Less well educated

Often referred by specialists

Poorer

Cultural / environmental barriers

How is Public different from Private?

HOSPITAL

Bureaucratic obstacles

Staff less regular

Inferior gear

Requirement for training

More intensive care resources

Better access to research support

Who Qualifies for Bariatric Surgery at CMDHB?

BMI > 40

Obesity > 5 years

Failed non-surgical attempts at weight loss

Understanding of and motivated for surgery

Accepts long term follow up

And who doesn't?

Age >50 or <20

Weight >200kg or BMI over 55

Current substance abuse (including nicotine)

Pulmonary hypertension

Established cirrhosis / portal hypertension

Dilated cardiomyopathy

Renal failure other than microalbuminuria

History of malignancy (other than low risk eg SCC)

And who doesn't? Cont….

Personality disorder

Brain injury / Prader Willi

Respiratory disease other than OSAS

Steroid dependent disease

Any condition requiring warfarinization

Unstable psychiatric disease

What happens next?

Ineligible referrals declined

Incomplete referrals returned

Accepted referrals invited to information session

Patients sent questionaire and information

Non-attenders discharged

Consultation

After info session patients invited to make appointment

Will see a bariatric surgeon

Discuss aspects of surgery

Goals for pre-op weight loss and exercise set

Most progress straight to waiting list

Some need further assessment

Who goes on the waiting list?

Controlled co-morbidities

Acceptable operative risk

Motivated

Reasonable expectations

Able to establish regular exercise

Able to meet specific weight loss goal

What happens on waiting list?

Date for surgery set

Anaesthetic assessment (very few)

Dietary assessment / education

Optifast given for 3 weeks preop

Surgery (DOSA)

What happens in hospital?

Day of surgery admission

90 minutes operating time for sleeve

Mobilized immediately

Drinking immediately

Progress to pureed diet day 1

Dietetic inpatient visit

Discharged day 2 post op

Current surgical options

- Adjustable gastric banding
- Sleeve gastrectomy
- Roux-en-Y gastric bypass
- Bilio-pancreatic diversion

Sleeve gastrectomy

Removes 80-90% stomach volume

What can go wrong?

DURING SURGERY

Larger incision may need to be made because of technical difficulty with keyhole approach
Bowel injury from insertion of keyhole instruments
Bleeding, from blood vessels or injured organs
Injury to the spleen. May require removal of the spleen
Injury to other organs. Examples: Oesophagus, pancreas, liver
Technical difficulty leading to change in operation strategy

AFTER SURGERY

Death. Rate = ½ -1%
Leak from staple lines. Rate =1%
Bleeding. May require transfusion or return to surgery
Infection. At keyhole incisions, or deep with the abdomen
Sepsis. Severe infection that can lead to organ failure and death. This can lead to prolonged hospital stay and further surgery.
Pulmonary embolus, a blood clot in the lungs, can be fatal. Rate = 1%
Deep vein thrombosis. A blood clot in the leg veins
Pneumonia
Respiratory failure. Inability to breathe adequately after surgery. This may require support of breathing in an intensive care ward
Heart attack or abnormal heart rhythm
Stroke
Pancreatitis
Urinary tract infection or injury to the urinary tract from catheter insertion
Complications related to placement of intravenous and arterial lines. This includes bleeding, nerve injury, or pneumothorax (collapsed lung)
Nerve or muscle injury related to positioning during surgery
Allergic reactions to medication, anaesthetic agents or prosthetic devices
Colitis (= inflammation of the colon). Usually due to antibiotics used in surgery
Constipation

IN THE LONGER TERM

Troublesome symptoms may include: Abdominal pain, change in bowel pattern, tiredness, bloating, nausea or vomiting
Narrowing at the middle of the stomach (Hour glass stomach). May require stretching with a balloon or rarely surgery
Excessive or inadequate weight loss. Rarely requires further surgery
Dehydration or imbalance of body salts. Usually from inadequate fluid intake, infrequently requires admission to hospital
Inflammation of the remaining stomach or oesophagus
Gall bladder disease. Usually from gallstones that form during rapid weight loss, can require surgical removal of the gallbladder
Hernias at the site of incisions
Psychological problems can include depression, adjustment disorder, relationship difficulties and rarely suicide
Liver disease or failure. Can occur if there is underlying liver damage that is worsened by weight loss or surgery
Hair loss from protein malnutrition

What is the follow up?

Discharge Post op day 2

Review at 2 weeks

Some will see GP at 1 week to adjust medications

Dietician review at 6 weeks

Further follow up 3 / 6 / 12 / 18 / 24 months

Blood tests at 3 / 6 / 12 months

What are the results like?

100 LSGs March 2007 – July 2008

Mean age 43

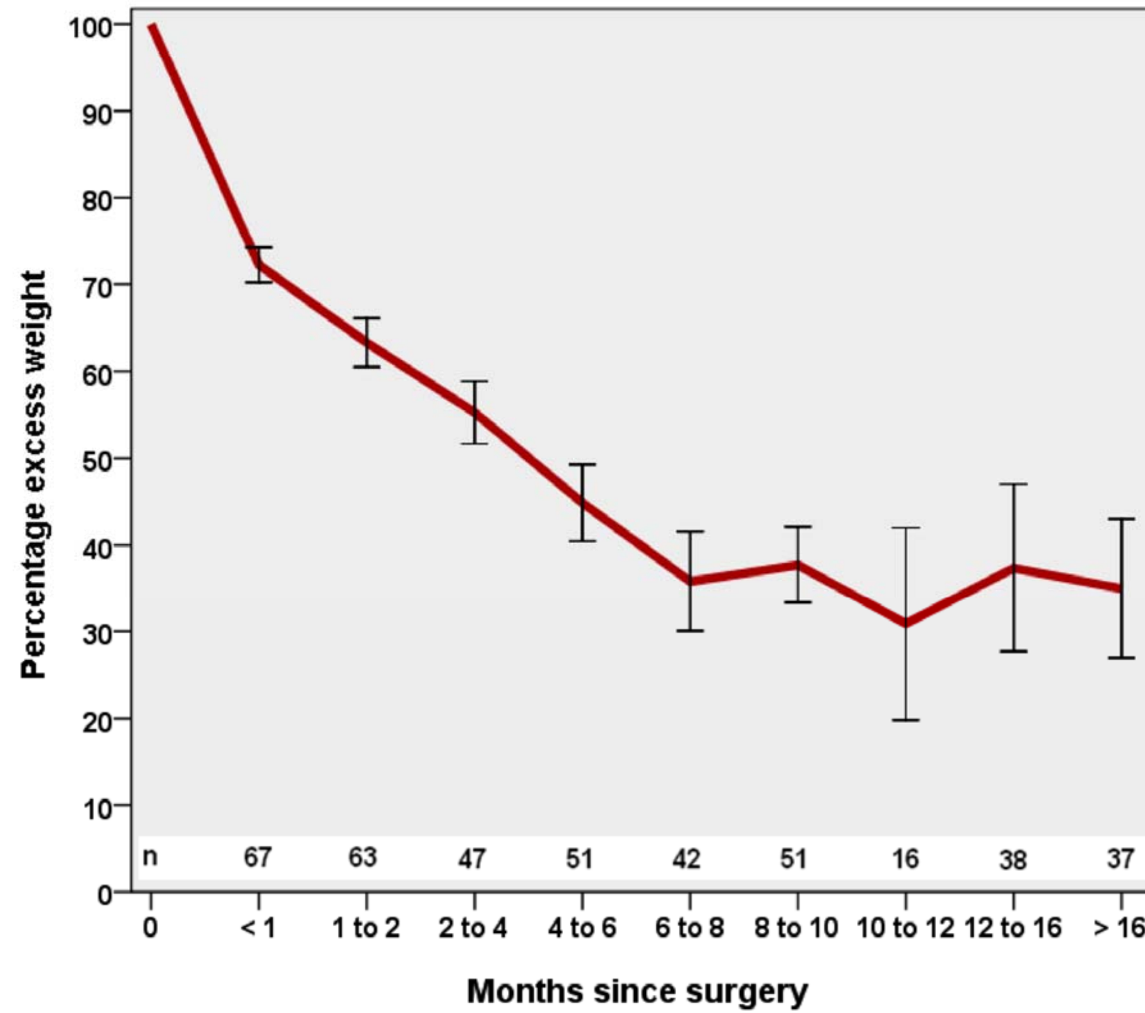
80 Female

60% European 19% Maori 12% PI

Mean BMI 50.3

Mean weight 140.8 kg

What are the results like?



What are the results like? - Complications

Mortality 0 %

Major complications 7.0 %

- 1 iatrogenic transected stomach => converted to open
- 3 staple line leaks
  - 1 requiring laparotomy and suture of pinhole leak
  - 1 stented (distal stricture)
  - 1 normal diag lap on D3, CT leak and collection => CT guided drainage D22
- 2 staple line bleeds
  - 1 requiring laparotomy
  - 1 re-laparoscopy and application of surgicell
- 1 infected haematoma requiring laparotomy
- 1 critical stricture requiring endoscopic dilation
- Minor complications 3.0%

What are the results like?

	BMI ≥ 50	BMI < 50	*P* value
Mean absolute weight loss (Range)	**44.3 kg** (16.7 – 78.2)	**38.5 kg** (4.4 – 67.9)	**0.037**
Mean % excess weight loss (Range)	**53.6 %** (22.9 – 85.3)	**70.8 %** (7.2 – 129.0)	**0.0001**

What are the results like?

	n	Stopped medical therapy	Reduced medical therapy	No change
Diabetes	**25**	**12** (48.0%)	**6** (24.0%)	**7** (28.0%)
Hypertension	**45**	**16** (35.6%)	**11** (24.4%)	**18** (40.0%)
Hyperlipidaemia	**25**	**5** (20.0%)	**0**	**20** (80.0%)
OSA	**17**	**9** (52.9%)	**0**	**8** (47.1%)

What do patients struggle with?

Hydration

Medications

Energy

Reflux

Emotions

Relationships

Disappointment

How can chances of success be optimized?

Selection of motivated and informed patients

Complete and comprehensive referral

Education of patients regarding requirements of the program

Current research projects

RCT: Wrap around v standard perioperative

In chronic diabetic patients

Evaluation of 1st 300 patients

Future research projects

Diabetes and gut hormone changes after bariatric surgery

Urinary tract symptoms after bariatric surgery

Bariatric surgery in adolescents

Review of pharmaceutical costs pre v post bariatric surgery

Hopefully more substantial cost analysis

Enhanced recovery following sleeve gastrectomy

Contact information

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THANK YOU

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