

Effectiveness of Very Low Calorie Diet (VLCD) in Weight Reduction of Super Obese Patient Prior to Laparoscopic Gastric Banding

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Aims

1. To reduce the weight of a super obese patient with Body Mass Index (BMI) 99 kg/m² prior to Laparoscopic Gastric Banding (LGB)
2. To improve co-morbidities i.e. Obstructive sleep apnoea (OSA) with Type 2 respiratory failure and osteoarthritis
3. To improve the overall quality of life

Introduction

A 30 year old Malay man (weight = 250.5kg; BMI 99 kg/m²) was admitted for elective LGB. The medical conditions presented included severe obesity, OSA with Type 2 respiratory failure and osteoarthritis.

To reduce intra-operative mortality, the patient consented to 12 weeks of VLCD to lose at least 40 kg (15% of body weight) prior to LGB.

VLCD is a Protein Sparing Modified Fast that provide 200 – 800 kcal & 1.5 – 2.5 g protein / kg ideal body weight. It aims to reduce the weight through the breakdown of fats rather than muscles. The product taken was Optifast® (Novartis).

Method



Results

Patient was admitted for 15 weeks. VLCD was administered for 11 weeks.

- Week 12 - Stopped VLCD (surgical tracheotomy)
 - ➔ NBM / OptiFast® / purees / any food ad libitum
- Week 14 - LGB
- Week 15 – Discharged

Weight:

Week 12 - Total weight loss = **50.3 kg** (20% of body weight; BMI= 79.2kg/m²)

Week 15 - Total weight loss = **60.5 kg** (24.2% of body weight; BMI=75.2kg/m²)

Blood Gases

	Week 1	Week 10
P CO ₂	62 mmHg	38.9 mmHg
Standard Bicarbonate	32.9 mmol/L	25 mmol/L

Weight Progress:



Conclusion:

Very Low Calorie Diet was an effective method in weight reduction for this super obese patient prior to LGB. Motivation and close monitoring by doctors and dietitians was mandatory during treatment. Patient's co-morbidities and overall quality of life improved after a weight loss of 50.3 kg.