

A case of life-threatening, early-postoperative refeeding syndrome in an obese young female undergoing laparoscopic sleeve gastrectomy

T. R. Chiu^{1, 2}, S. M. M. Meslin^{1, 2}, M. L. Talbot^{2,3,4}, J. J. Jorgensen⁴, O. M. Fisher^{2, 3, 4}

¹Department of Medicine, UNSW Medicine, UNSW, Sydney Australia

²Upper GI Surgery Unit, Department of Surgery, St George Hospital, Kogarah, NSW

³St George & Sutherland Clinical School, UNSW Australia, Sydney, Australia

⁴Department of Surgery, Notre Dame University School of Medicine, Sydney, Australia

Background

Patients who have undergone bariatric surgery experience rapid but intended weight loss and are on very low calorie diets (VLCD) for several weeks leading up to and following surgery. Many of these patients are in a malnourished state, placing them at an increased risk of developing potentially life-threatening refeeding syndrome (RFS) upon commencing appropriate nutrition. Bariatric surgery currently carries and unknown risk of RFS. This is the first report of RFS occurring in the early postoperative phase after sleeve gastrectomy.

Case Report



Age: 18
BMI: 33.5 kg/m²
Height: 163cm
Weight: 89kg
Diet: Opti-fast™ VLCD*



*<800 calories, <56g carbohydrates daily

Bariatric surgery for increasing obesity due to PCOS and insulin resistance



RFS

Presented to ED after consuming carbohydrate-dense foods with:
BMI: 29.7kg/m²
Headaches, fever (39.3°C)
Severe electrolyte disturbances

- Hypokalaemia (1.8 mEq/L)
- Hypomagnesaemia (0.53 mmol/L)
- Hypophosphataemia (0.39 mg/dL)

ECG changes

- u-waves, ST depression

Required ICU admission for 3 days for IVF and electrolyte replacement
Uneventful recovery

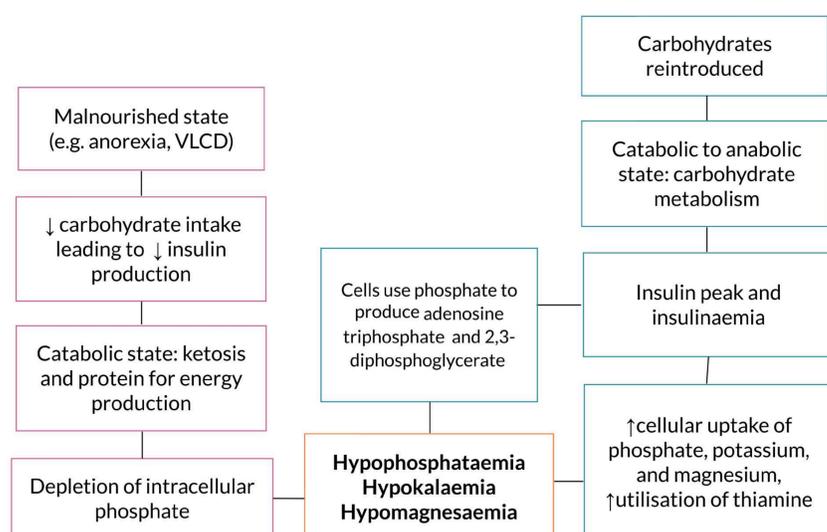
Pre-operative
(2-6 weeks)

Laparoscopic Sleeve
Gastrectomy

Post-operative
(2 weeks)

Discussion

Pathophysiology of RFS



Does bariatric surgery increase the risk of RFS?

Risk Factors:

- VLCD for weeks before and after surgery
- High BMI (diagnosis of RFS may be overlooked per NICE guidelines below)

Protective factors:

- Anatomically restricted from overconsumption of food due to reduced stomach size

NICE guidelines for identifying patients at high risk of RFS

1 or more of the following:

- Body mass index (kg/m²) <16
- Unintentional weight loss >15% in the past three to six months
- Little or no nutritional intake for >10 days
- Low levels of potassium, phosphate, or magnesium before feeding

OR

2 or more of the following:

- Body mass index <18.5
- Unintentional weight loss >10% in the past three to six months
- Little or no nutritional intake for >5 days
- History of alcohol misuse or drugs, including insulin, chemotherapy, antacids, or diuretics

Acknowledgements

We thank the patient and her family for allowing us to share her details as well as all the staff involved in her care

References

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