Enhancing Clinical Success through Intensive Dietary Support in Bariatric Surgery Patients in an Asian Population

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CONFLICT OF INTEREST OF DISCLOSURE

I have no potential conflict of interest to report

ETHICAL CONSIDERATIONS

This study is approved by the IRB (NMRR and MREC)

Background

Outcomes following bariatric surgery can be variable:

➔ Surgical techniques

➔ Dietary adherence

➔ Psychosocial factors

Research Question

How does Intensive Dietary Support (IDS) compare to Standard Care (SC) in influencing weight loss and BMI change following bariatric surgery in an Asian population?

Primary Objective

To determine the effectiveness of **Intensive Dietary Support group (IDS)** versus **Standard Care group (SC)** on weight loss and BMI changes at 6-month and 12-months post bariatric surgery in an Asian population

Secondary Objectives

- To evaluate the rates of postoperative **complication** & the **dietary adherence** between IDS and SC groups
- To determine if IDS leads to an increased or similar rate of complications as compared to SC.

Methodology

Study design:

- Retrospective study
- 200 patients
- A single surgeon
- Divide patients into IDS and SC group

Inclusion criteria:

- All patients who underwent LSG/ LRYGB in Jan –Dec 2022
- 18-65 years old

Exclusion criteria:

- Revisional procedures

Primary Outcome Measures:

- %Excess BMI Loss >50% and %Total Body Weight Loss >20%

Definition

Intensive Dietary Support

- ➔ Frequency of consultations (attend ≥ 4 follow ups) [1-3]
- ➔ Personalised meal plannings
- ➔ Ongoing education
- ➔ Close monitoring

1. Reiber, Beata M M et al. “Weight Loss Results and Compliance with Follow-up after Bariatric Surgery.”
2. Shen, R., Dugay, G., Rajaram, K., Cabrera, I., Siegel, N., & Ren, C. J. (2004). Impact of patient follow-up on weight loss after bariatric surgery.
3. Switzer, N. J., Merani, S., Skubleny, D., Pelletier, J. S., Kanji, R., Shi, X., Birch, D. W., de Gara, C., Sharma, A. M., Gill, R. S., & Karmali, S. (2016). Quality of Follow-up: Systematic Review of the Research in Bariatric Surgery.

Definition

Standard Care

➔ Frequency of consultations (attend ≤ 3 follow ups) [1-3]

1. Reiber, Beata M M et al. “Weight Loss Results and Compliance with Follow-up after Bariatric Surgery.”
2. Shen, R., Dugay, G., Rajaram, K., Cabrera, I., Siegel, N., & Ren, C. J. (2004). Impact of patient follow-up on weight loss after bariatric surgery.
3. Switzer, N. J., Merani, S., Skubleny, D., Pelletier, J. S., Kanji, R., Shi, X., Birch, D. W., de Gara, C., Sharma, A. M., Gill, R. S., & Karmali, S. (2016). Quality of Follow-up: Systematic Review of the Research in Bariatric Surgery.

Result and Discussion

Result - Baseline characteristics

Variables	IDS (n=100)	SC (n=100)	P-value
Age, year (M±SD)	39 ± 7	41 ± 9	0.386
Gender			
Women (%)	86	85	0.923
Men (%)	14	15	0.901
Surgical procedure			
LSG (%)	13	14	0.911
LRYGB (%	87	86	0.825
Preoperative Weight, kg	38.3 ± 7.4	40.1 ± 8.8	0.751
Preoperative BMI, kg/m2	101.9 ± 22.8	105.5 ± 24.9	0.345

Result - Primary Outcome

Percentage of Weight Loss in 6-month and 12-month

		IDS (n=100)	SC (n=100)	p-value
6-months	%EBMIL	61.4 ± 8.6	34.2 ± 6.9	<0.001
	%TBWL	21.5 ± 6.5	14.7 ± 4.7	<0.001
12-months	%EBMIL	81.5 ± 16.4	46.2 ± 4.9	<0.001
	%TBWL	30.3 ± 9.5	20.1 ± 5.8	<0.001

Result - Secondary outcome

Early postoperative complication

- There were no early postoperative complications documented in both groups

Result - Secondary outcome

Dietary complications in 6-month and 12-month

	IDS (n=100)	SC (n=100)	P-value
6-month	20 (20%)	23 (23%)	0.400
12-month	9 (9%)	10 (10%)	0.449

Result - Secondary outcome

Nutrition intake in 6-month and 12-month

Timepoint	Variables	IDS (n=100)	SC (n=100)	p-value
6-months	Energy (Kcal)	897.5 ± 87.9	1214.9 + 123.1	<0.001
	CHO (g)	51.8 ± 19.8	122.2 ± 20.7	<0.001
	Protein (g)	59.4 ± 8.9	58.8 ± 8.7	0.701
	Fat (g)	50.3 ± 9.8	54.5 ± 8.9	0.003
12-months	Energy (Kcal)	991.7 ± 169.9	1323.8 ± 153.1	<0.001
	CHO (g)	56.9 ± 27.8	132.2 ± 30.8	<0.001
	Protein (g)	67.4 ± 6.6	62.5 ± 8.8	0.004
	Fat (g)	54.9 ± 8.3	60.6 ± 9.2	<0.001

Discussion

Primary outcome: weight loss percentage

Bariatric patients who are in the IDS group experienced greater weight loss and reduction in BMI at 6 months & 12 months compared to the standard care (SC) group.

Secondary outcome: complication and nutrition

IDS did not result in higher complications and provide greater dietary adherence.

Strength

- Sample size was able to represent the general Malaysian population
- Data was assessed by trained professionals

Limitation

- Retrospective study
- Underreporting: Underestimate total calories
- Short-term study: Only 12-months

Conclusion

Intensive Dietary Support (IDS) when compared to Standard Care (SC) lead to better weight loss outcomes and BMI reduction in patients after bariatric surgery