

PR2.F – Case study 3 - Bulimia

Case description

- 17-year-old female patient, residing in an urban area, coming from a family with medium/high socio-economic status
- From the nutritional and medical anamnesis: the patient has had a narcissistic behaviour with a poor diet for about 4 years
- Due to marginalization within school groups, the patient has problems accepting her weight and body shape
- She reduced the number of meals by serving only one meal a day
- In the last 6 months, the patient reported fluctuating changes in weight ± 3 kg
- The patient had no specific symptoms of micronutrient deficiency or menstrual imbalance
- Binge/compulsive eating episodes were reported 5-6 times per month with episodes of guilt
- Episodes of self-induced vomiting occur 1-2 times a month
- The level of physical activity was between 1 and 2 hours/day, 7 days a week
- Following the psychiatric evaluation, usual normal tests are identified, treatment and cognitive behavioral therapy are initiated
- Dietary consultation and careful monitoring of the food plan over a period of at least 18 weeks were recommended

Questions

Using the information provided, determine:

- the patient's anthropometric status in relation to age
- the energy requirement to maintain the current weight
- nutritional requirements (calories and macronutrients) for weight rebalancing
- basic recommendations for physical activity
- short-term expectations (4 and 6 weeks)
- dietary approach if the set goal is not reached
- medium-term expectations (1 year)



Example of a dietary approach to the presented case

Anthropometric and nutritional assessment

17y 4m (208 months), female

	Value	Imperial	%ile	Z-score	50%ile
Weight (kg)	47	103.6 lb	11%	-1.21	55.5
Stature (cm)	164	64.6 in	56%	0.16	163
Wt-for-stature (kg)					
BMI-for-age	17.5		6%	-1.54	21.0

Following the food diary assessment, the following results were obtained: 1018 kcal/day, 51 g protein, 127 g carbohydrate, and 31 g fat during 3 main meals, without snacks, including all food groups

Estimated Daily Caloric Needs	2,759 kcal/day
-------------------------------	----------------

Macronutrients:

Macronutrient	Recommended Intake Per Day
Carbohydrate	310 - 448 grams ⓘ
Total Fiber	26 grams
Protein	40 grams
Fat	77 - 107 grams ⓘ
Saturated fatty acids	As low as possible while consuming a nutritionally adequate diet.
Trans fatty acids	As low as possible while consuming a nutritionally adequate diet.
α-Linolenic Acid	1.1 grams ⓘ
Linoleic Acid	11 grams ⓘ
Dietary Cholesterol	As low as possible while consuming a nutritionally adequate diet.
Total Water	2.3 liters (about 10 cups) ⓘ

Establishing nutritional requirements

- A diet plan was initiated. The patient had a mean intake of 1400 kcal for a period of 2 weeks, with a gradual increase of 150 kcal/week until an intake of 2000 kcal/day was reached
- The patient had to limit sports activity to 60 minutes/day, 5 days a week

	At initiation	At 6 week intervals	At 12 weeks interval
Proteins (g)	68	83	97
Fats (g)	45	54	64
Carbohydrates (g)	170	207	243
Calories	1400	1700	2000



Completion of interventional therapy

- Dietary recommendations were supplemented with group and individual therapy
- Recommendations for: psycho-emotional management, music therapy, dance therapy, personal motivation, collateral activities of active rest and increasing self-confidence, group communication

Re-evaluation at four-week interval

17y 5m (209 months), female

	Value	Imperial	%ile	Z-score	50%ile
Weight (kg)	48.3	106.5 lb	16%	-1.00	55.6
Stature (cm)	164	64.6 in	56%	0.15	163
Wt-for-stature (kg)					
BMI-for-age	18		10%	-1.28	21.1

Estimated Daily Caloric Needs	2,272 kcal/day
-------------------------------	----------------

Macronutrients:

Macronutrient	Recommended Intake Per Day
Carbohydrate	256 - 369 grams ⓘ
Total Fiber	26 grams
Protein	41 grams
Fat	63 - 88 grams ⓘ
Saturated fatty acids	As low as possible while consuming a nutritionally adequate diet.
Trans fatty acids	As low as possible while consuming a nutritionally adequate diet.
α-Linolenic Acid	1.1 grams ⓘ
Linoleic Acid	11 grams ⓘ
Dietary Cholesterol	As low as possible while consuming a nutritionally adequate diet.
Total Water	2.3 liters (about 10 cups) ⓘ

- Following the re-evaluation, a positive weight evolution was observed
- The patient managed to stick to the indicated food plan with 3 main meals
- Binge eating episodes were reduced to 1-2 over a month with no vomiting episodes
- Continue with a 2000 kcal/day meal plan, with target inclusion of all food groups and percentage increase of all macronutrients
- The introduction of 1-2 snacks was attempted, without being mandatory
- The patient was advised to reduce the intake of sweet juices by hydrating with water and teas, while using some food supplements
- Physical activity, also increased interest in Mindful Eating and cooking
- The psycho-emotional management evolved, the patient was more involved motivationally



Re-evaluation at other six-week interval

- Weight evolution was positive and constant
- Psychiatric evolution was positive, without episodes of compulsive eating and self-inflicted vomiting
- The patient was still dissatisfied with the appearance of her own body and the accumulated weight, but self-monitoring was slower; she was involved in more group activities and sports activity has decreased in intensity

Re-evaluation at other six-week interval

17y 6m (210 months), female					
	Value	Imperial	%ile	Z-score	50%ile
Weight (kg)	52	114.6 lb	33%	-0.45	55.7
Stature (cm)	165	65.0 in	62%	0.30	163
Wt-for-stature (kg)					
BMI-for-age	19.1		23%	-0.75	21.1

The patient continued with a food plan of 2000-2200 kcal/day, a more flexible food plan, and monitoring at 6-8 week intervals

Weight evolution after personalized dietary intervention at about 1 year

17y 4m (208 months), female					
	Value	Imperial	%ile	Z-score	50%ile
Weight (kg)	47	103.6 lb	11%	-1.21	55.5
Stature (cm)	164	64.6 in	56%	0.16	163
Wt-for-stature (kg)					
BMI-for-age	17.5		6%	-1.54	21.0



- Binge eating episodes were reduced to zero
- Dietary and medical monitoring continues

18y 8m (224 months), female					
	Value	Imperial	%ile	Z-score	50%ile
Weight (kg)	55.2	121.7 lb	42%	-0.20	56.9
Stature (cm)	166	65.4 in	67%	0.43	163
Wt-for-stature (kg)					
BMI-for-age	20		30%	-0.52	21.5