

## Analysis of social aspects and dietary hygienic habits in patients undergoing bariatric surgery.

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### Summary:

We analyzed 88 patients who performed a transversal study during the follow-up in the morbid obesity surgery specific consultation between 6-12 months of surgery and maintenance of one year of follow-up. Age, gender, pre and postoperative BMI and the type of surgery performed were assessed. In addition, we study the social aspects and dietary habits of patients.

70,5% (n = 62) are women, with an age of  $45,01 \pm 8,55$  years. The BMI before the intervention was  $47,29 \pm 5,54\text{kg} / \text{m}^2$  being  $34,52 \pm 6,48\text{kg} / \text{m}^2$  a year after surgery. 79 vertical gastrectomies and 9 gastric bypass were observed. Socially, 30,2% (n = 27) had only primary studies, 26,7% (n = 23) were unemployed and 15% (n = 13) were disabled. 81,6% (n = 72) admitted to perform some physical activity. 12 patients (12,9%) continue to eat fast food and 18 patients (20,7%) continue to eat sandwiches most days. The vast majority have good family support.

We believe important knowledge of the social and family support of patients in our environment and their influence in achieving good results of bariatric surgery and the choice of surgical technique.

### Keywords:

- Obesity
- Social aspects
- Dietary habits
- Physical activity

### Introduction

Obesity is produced by multiple factors (1) mainly determined by the imbalance between calorie intake and burning in favor of it. This imbalance may be also favored from psychological or behavioral factors by multiple social actions that can determine the schedule and eating control, the understanding of the diet and its characteristics (2). Likewise, the performance of physical activity is another key factor in determining the results (3). Changing eating habits is sometimes difficult for these patients, with family involvement being a fundamental support in order to keep an orderly diet and a firm adherence to the diet.

### Material and methods

A retrospective observational population study was performed to all the patients operated during the period between 2012 and 2019, among these, 88 patients have been able to collect all the study data. Subsequently, they were analyzed with the SSPS statistics 25.0 system, in which the gender, average age and weight loss measured as BMI of the patients during the year of follow-up were studied. The social aspects measured were the academic studies, being primary those that refer to compulsory education and secondary to high school.

It was also recorded if the patient had any handicap or disability and if he also performed some type of physical activity on a regular basis. During the follow-up, the family involvement in food preparation and continuity of fast food and snack food intake were asked through a questionnaire on the frequency of consumption of different types of food.

### Results

70.5% (n = 62) are women, with an average age of  $45.01 \pm 8.55$  years. The BMI before the intervention was  $47.29 \pm 5.54\text{kg} / \text{m}^2$  and  $34.52 \pm 6.48\text{kg} / \text{m}^2$  one year after the surgery. Regarding the surgical technique, 79 sleeve gastrectomies and 9 gastric bypasses were performed. In regard to the social environment, 30.2% (n = 27) had only primary elementary or non-university secondary studies and 60.8% had standard studies (Table 1), likewise 26.7% (n = 23) were in a situation unemployment and 15% (n = 13) had some degree of disability. 81.6% (n = 72) admitted they were performing some physical activity. 12.9% (n = 12) continue to eat fast food and 20.7% (n = 18) continue to substitute some of the main meals with the intake of snacks on a regular basis. The vast majority, 90.2% (n = 80) has a good family support (Table 2).

Primary	30,2%
Secondary	60,8%
University	9%%

Table nº 1: Level of studies of the analyzed patients.

Studied Variables	Results
Unemployment	26,7%
Disability	15%
Physical exercise	81,6%
Fast food	12,9%
Snacks	20,7%
Family support	90,2%

Table nº 2: Characteristics of dietary and occupational hygiene habits of the study patients.

### Discussion

Obesity is increasingly prevalent throughout the world, being the obesity figures the highest in Spain (4).

It is known that the most effective treatment that achieves greater weight loss kept over time is bariatric surgery with any of its techniques.

But many times the results obtained are not as good as we expect. When the technique has been adequate, we have to think that there may be one or more factors that can overshadow our objectives. Among these factors, we believe that it is essential to know the social aspects of the patient, such as the level of studies, the work situation, and the performance of some physical activity on a regular basis, also highly influenced by the different disabilities that these patients may have due to obesity, especially at the locomotive level.

A low social-cultural level is related to a poor diet and higher levels of obesity (5), we also believe that the unemployment situation is important, since continued postoperative treatments based on oral vitamin or nutritional supplements are a source of economic expense that can lead to discontinuation of treatment and the appearance of complications or weight loss (6,7). As for physical activity, there are plenty of words to emphasize the importance of regular physical activity with the help of weight loss once intervened as an aid to the surgical technique (8).

This physical activity is related if the patient previously has some kind of disability or handicap due to locomotive obesity or other different causes (9).

These are the reasons we should also know, as we have done in our study, we should know these factors prior to surgery, in order to try to correct and optimize, as we do with the weight and metabolic level, to social and physical level, performing learning behavioral therapies and teaching physical activity adapted to their weight (10). Likewise, we must adapt the surgical technique taking into account these factors, since performing a malabsorptive technique, more demanding at the level of supplementary treatment and sometimes, with a higher level of intestinal alterations, rises to complications during the postoperative follow-up.

On the other hand, performing pure restrictive techniques in patients with little mobility and who are not able to keep an adequate diet with high fat intake and fast food, can lead to less weight loss than expected.

It is important to remark that a high percentage of patients admit to keeping a diet based on fast food (with high fat content) and with sandwiches, generally processed sausages, knowing this diet is necessary to correct these bad eating habits in order to increase the weight loss (11,12).

Finally, all these patients need good family support to help them, encourage them and show solidarity with them in keeping the postoperative diet, and reinforce their attitude throughout the process (13).

### Conclusion

A multitude of aspects, not only strictly medical, influence the results of the bariatric surgery. We believe that it is essential to know the work and social status and the different hygienic-dietary guidelines and, therefore, we must influence the evaluation of patients in all these factors with a view to the correct indication of the technique, the time of surgery and perhaps a better understanding of the failure or success of the results obtained after bariatric surgery.

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