

NUTRITIONAL CONSULTATIONS FREQUENCY AFTER BARIATRIC SURGERY

Avaliação da frequência em consultas nutricionais dos pacientes após cirurgia bariátrica

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ABSTRACT – Background - With the growth of surgical interventions to reduce obesity, there is a necessity of a periodic nutritional attendance at long term to ensure the nutritional status of the patients. **Aim** - To assess the adherence to the periodic nutritional attendance of patients undergoing bariatric surgery. **Methods** - Data were collected from registration forms of a nutrition service from patients who underwent bariatric surgery between 2001 and 2008. **Results** - Were evaluated 469 registration forms, of which 83% corresponded to female and 16.8% to male, with a mean age of 38.2 ± 12.03 years. The attendance showed an average of 2.04 ± 0.77 pre-operatively queries and 3.4 ± 9.19 post-operative queries and there was progressive reduction in assiduity of these patients in surgical follow-up. **Conclusion** - There was a high dropout of the patients in post-operative nutritional attendance, being primarily concerned about the high dropout after two years of surgery; this tendency may result in metabolic complications and regain of lost weight.

HEADINGS - Obesity, morbid. Bariatric surgery, Postoperative Period.

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DESCRITORES - Obesidade mórbida. Cirurgia bariátrica. Período pós-operatório.

RESUMO – Racional – Com o crescimento das intervenções cirúrgicas para reduzir a obesidade, há necessidade de acompanhamento nutricional periódico a longo prazo para garantir o estado nutricional dos pacientes. **Objetivo** - Avaliar a adesão ao acompanhamento nutricional periódico dos pacientes submetidos à cirurgia bariátrica. **Métodos** - Foram coletados dados das fichas de cadastro do serviço de nutrição de pacientes que realizaram operação bariátrica entre 2001 e 2008. **Resultados** - Foram avaliadas 469 fichas. Delas 83% eram de mulheres e 16,8% de homens com média de idade de $38,2 \pm 12,03$ anos. O acompanhamento apresentou média de $2,04 \pm 0,77$ consultas no pré-operatório e $3,4 \pm 9,19$ consultas no pós-operatório e houve redução progressiva da assiduidade destes pacientes em relação ao tempo pós-cirúrgico. **Conclusão** - Verificou-se alta evasão no acompanhamento nutricional no pós-operatório, sendo preocupante a alta desistência principalmente após dois anos, o que pode resultar em complicações metabólicas e recuperação do peso perdido.

INTRODUCTION

The significant increasing cases of morbid obesity worldwide are resulting in the growth of the surgical intervention to correct this illness. The intention is to decrease, by significantly loss of overweight, the risk of mortality and comorbidity – arterial hypertension, type 2 diabetes mellitus, obstructive sleep apnea syndrome, dyslipidemia, and hepatic disease¹⁹. However, the indication to the surgical treatment must be suggested through the clinical evaluation realized by the multidisciplinary team²⁰, considering the previous non invasive treatments to lose weight, such as taking medicines, nutritional follow-up and physical exercise¹⁰.

In Brazil, a survey realized between 2008 and 2009, called Orçamentos Familiares from IBGE (Instituto Brasileiro de Geografia e Estatística) demonstrated prevalence in Brazilian society (16,9% to female, and 12,4% to male)¹². According to the Ministério da Saúde, in 2008, a total of 3.195

surgeries were realized in hospitals that attend the public health service, called Serviço Único de Saúde (SUS), presenting a significant increasing of 542% since 2001¹⁶.

Meanwhile, for effective postoperative results, the nutritional follow-up must be periodic and for a long-term, ensuring an adequate food intake quantitative and qualitative. After some period, nutritional deficiencies can occur in some patients, due to a deficient food intake and malabsorption of vitamins and minerals syndrome, resulting in malnutrition, neuropathy, food intolerances, and other diseases^{1,9,14,21}.

Aiming to verify the involvement of the patient, their food intake and weight maintenance, this paper has the objective of evaluate compliance of periodic nutritional follow-up from patients who had undergone bariatric surgery.

METHODS

A retrospective observational study was conducted to collect data from registration form in the Serviço de Nutrição do Centro Avançado de Videolaparoscopia do Paraná (CEVIP), Curitiba, Paraná, Brazil, referring to patients attended between 2001 and 2010, transcribed and analyzed through the Microsoft Excel software[®]. It was selected patients who underwent bariatric surgery (Roux-en-Y gastric bypass or duodenal switch) between 2001 and 2008. Patients submitted to more than one surgical procedure or other surgical techniques were excluded from this study.

Every patient was attended at least in two preoperative consultations, having their postoperative return predetermined, both according to the service record. The nutritional consultation returns were classified according to the period in days after the surgery: 1st month (0-30 days), 2nd to 3rd month (31-90 days), 2nd trimester (91-180 days), 3rd trimester (181-270 days), 4th trimester to 2 years (271-720 days), over two years (above 721 days).

The variables were descriptively analyzed through the frequency distribution, mean, and standard deviation.

RESULTS

A total of 469 forms were analyzed from which 83% corresponded to female, and 16,8% to mal. The mean age was 38,2±12,03 years old.

The attendance presented a mean of 2,04±0,77 preoperative consultation, and 3,4±9,19 – varying from 0 to 20 consultations - in postoperative. A progressive decrease in assiduousness in these patients was verified relative to the postoperative period (Table 1).

TABLE 1 - Assiduousness in patients for consultations after Bariatric Surgery

	Prevalence	Mean of consultations
1st month	81,45%	1,22 ± 0,08
2nd to 3rd month	51,81%	0,66 ± 0,78
2nd trimester	33,90%	0,40 ± 0,62
3rd trimester	25,59%	0,33 ± 0,67
4th trimester to two years	25,37%	0,50 ± 1,31
Over two years	14,93%	0,31 ± 1

DISCUSSION

The predominance of female in the sample probably is due to the fact that this group looks for treatment for obesity control more often than male^{10,11,12,13}.

The mean age found in the group studied shows similar numbers as in other studies with morbid obesese, showing relatively young population that already needs such a complex procedure to treat obesity^{2,4,15}.

A progressive decrease in assiduousness in these patients was observed relative to the postoperative period, opposite to what was published by Alvarado et al², in which 87,8% from analyzed patients joined the attendance in the postoperative period for at least one year.

The adherence was higher in the first trimester, decreasing significantly until the first year after the surgery. This shows the major concern of patients with the first period after the surgery, when the diet has specific characteristics and complications are higher; though it reflects the non comprehension of the major objective of the procedure that is to support the process of nutritional re-education, avoiding nutritional deficiencies and inadequate weight loss.

Concerning the consultation returns after two years after the surgery was observed a huge decrease – about 85% - in the patient frequency. Analyzing postoperative in more than five years, Hernández et al.¹¹ showed that 81,5% gave up the attendance, i.e., resulting in similar to what was found in this study, and worrying, since these patients can be resuming old life habits that may lead to nutritional deficiencies and weight regain.

Regarding the possible increase in weight in the postoperative period, emphasizing the period exceeding two years, is evident the necessity of periodic nutritional evaluation of food intake, in order to continue the process of nutritional re-education^{8,18}. Christou et al.⁶ evaluating patients with more than 16 years of surgery, showed mean loss of exceeding weight percentage of 77,4% after 10 years, and 55% in 16 years, confirming the possible weight regain⁶.

Antonini et al.³ and Cruz et al.⁷ reaffirm that only adequate nutritional attendance can guarantee the surgery success, avoiding nutritional complications and losses in weight loss, also reinforcing the necessity of

constant attention regarding to nutrition re-education in long-term. Both writers confirm that bariatric surgery is an efficient procedure to promote weight loss, its maintenance, improve biochemical markers and decrease comorbidities, by using nutritional expert follow-up.

Another aspect of huge relevance in this study, considering that the most part of the sample is formed by female, is bone health since Campos et al.⁵ reported insufficient calcium intake after 8 years of Roux-en-Y gastric bypass; female presented an intake of 50% less calcium than the recommended amount, associated with high occurrence of osteopenia.

The nutritionist intervention in the preoperative and postoperative bariatric surgical procedure is important to prepare and support the patient weight loss in a healthy and sustainable way, and also to correct nutritional deficiencies and improve the patient quality of life. Many complications in the nutritional situation may appear after the surgery; they can be avoided with periodic attendance.

It is the multidisciplinary team's responsibility to ensure the importance of the nutritional attendance in order to diminish metabolic complications and weight loss regain.

CONCLUSION

It was verified an elevated decrease in the postoperative nutritional attendance in bariatric surgery, being concern the high dropout especially after two years of operation. A possible alternative to this issue would be a specific work in the preoperative and the use of different strategies to give the patient an individualized nutritional attendance.

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