ORIGINAL RESEARCH

Bariatric surgery and perioperative education: The look of patients who are waiting for surgery

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ABSTRACT

Objective: To know the perception of patients who expect the performance of bariatric surgery on perioperative education.
Methods: Exploratory study performed with patients from the preoperative period of bariatric surgery in a reference institution in the realization of the surgical procedure by the Sistema Único de Saúde (SUS) in the State of Ceará, Brazil, in January 2019, through a focal group.
Results: Five categories related to the perception of the subjects about the perioperative education were identified: "Imagining what life will be like after the bariatric surgery"; "Fear and anxiety with the performance of bariatric surgery"; "Preoperative preparation and follow-up in the health service"; "Resolution of doubts during the preoperative preparation" and "Main doubts of those who are still in the preoperative".
Conclusions: It was evident that the participants recognized the importance of the preoperative follow-up of bariatric surgery, highlighted as beneficial the occurrence of educational strategies in this period for the acquisition of knowledge and resolution of doubts, especially about the surgical procedure and postoperative care.

Key Words: Obesity, Bariatric surgery, Health education, Perioperative nursing

1. INTRODUCTION

Obesity constitutes a chronic preventable and multicausal disease characterized by excessive accumulation of body fat, which can result in several health problems such as cancers, cardiovascular diseases, osteomuscular disorders and diabetes.[1,2]

According to the World Health Organization (WHO), this worldwide public health problem almost tripled from 1975 to 2016, when more than 1.9 billion adults aged 18 and over were overweight in this last year, of which more than 650 million were obese.[1] In Brazil, in 2019, according to estimates by the Surveillance of Risk Factors and Protection for Chronic Diseases by Telephone Survey (Vigitel), the frequency of obese adults was 20.3%, being higher in women (21.0%) compared to men (19.5%).[3]

In this context, among the strategies to face obesity there is a conservative treatment such as dietary control, use of medication and behavioral and psychological guidance. There is

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also the surgical treatment known as bariatric surgery or gastroplasty, which is a therapeutic method that allows weight reduction in the long term and provides an opportunity to improve the quality of life with the control of associated comorbidities.[4]

The indication for the surgical procedure is made for patients with clinically severe obesity, being necessary a careful evaluation of them in relation to nutritional and psychological aspects. In addition, during the treatment process, it is recommended the perioperative multiprofessional follow-up to simplify the acquisition of knowledge and appropriate health behaviors by parts of the patients in order to effectively address the implications of the surgical procedure.[5]

In this situation, education in perioperative health is highlighted as a fundamental strategy for the promotion of the subjects' health, which enables the construction of knowledge in a transformative and non-impositive way through several educational technologies such as applications, brochures and educational booklets.[6, 7]

Several studies have shown the effectiveness of educational interventions aimed at promoting perioperative care of bariatric surgery, such as weight control and/or dietary improvement.[8, 9] However, an assistematic review of the literature points to a scarcity of studies that address the perception of subjects about perioperative health education, as well as doubts and expectations about the benefits of preoperative preparation over bariatric surgery.

Thus, it becomes fundamental to understand the patients' perceptions about these themes, since the results obtained can guide the formulation of educational interventions and health technologies focused on the main doubts, desires and expectations of individuals regarding bariatric surgery and the follow-up provided by professionals. Therefore, this study had as objective? To know the perception of patients waiting for bariatric surgery on perioperative education.

2. METHOD

Exploratory study of qualitative approach, performed with patients from the preoperative period of bariatric surgery in a reference institution in the realization of the surgical procedure by the Sistema Único de Saúde (SUS) in the state of Ceará, Brazil, through a focal group.

2.1 Data sources

The focus group took place in only one meeting in January 2019 and included eight preoperative patients, the researcher (moderator) and three observers. The focal group was chosen to perform with individuals who have not yet undergone surgery in order to verify whether they have knowledge about the care in the perioperative period, because they are already able to perform the surgical procedure and the knowledge about the surgery is a criterion for the indication of the surgical procedure.

After the institution's permission to hold the meetings, the Center of Epidemiology was requested the list of individuals who were already able to perform the surgery. From this list, it was made the random choice of 12 subjects in order to guarantee the presence of the minimum number of subjects proposed by the literature, because if there was a 50% non-attendance rate, the group would still have the presence of six participants, being therefore valid. The invitation was made by telephone and if the patient was not contacted or refused to participate in the study, another number was drawn until the group was composed of 12 participants.

2.2 Data collection process

The day before the focus group meetings, the researcher made a new telephone contact with each participant to recall the date and time and reconfirm attendance. On the scheduled day, the researcher arrived an hour before the time agreed with the subjects to organize the environment. A notice was placed at the door of the room and at the entrance and corridors of the institution to facilitate the identification of the place and the access of the subjects. The room was air-conditioned and the chairs were arranged in circles to facilitate visual contact between participants.

The meeting was divided in two moments: first, the subjects were asked about subjects they would like to know about bariatric surgery and perioperative care. After the discussion of this subject, there was a pause for the break in which a healthy snack was served to the participants. After that moment, the meeting continued with the inquiry to the patients about how it should be an educational material about the surgical procedure for the patients. At the end of the meeting, the researcher thanked everyone for their presence and gave a toast: a refrigerator magnet in the shape of a butterfly, an image that represents the transformation that occurred in the lives of these individuals after bariatric surgery.

The focus group discussion was conducted by a theme guide, whose purpose was to provide a productive investigation. The theme guide consists of the questions to be worked on in the meetings, with the purpose of guiding the discussion, seeking clarifications that substantiate the objectives of the study. The elaboration of this instrument requires time, dedication, clarity of the study objectives and experience of the researcher. It should not be long and should be composed of qualitative and comprehensive questions that favor the natural approach of the theme.[10]

Before starting the questions proposed by the guide, the researcher (moderator) presented herself and the observers to the participants and explained again the objective of the meeting, then requested the reading and signing of the Term of Consent and the filling out of a characterization tool that contained epidemiological data and history of obesity.

2.3 Data collection analysis

The meeting was recorded, and the participants' speeches were transcribed, copying in full the content of all the answers related to a certain question. After this stage, the common speeches were identified and the highlighted phrases in which the data obtained were interpreted according to the content analysis proposed by Bardin.[11]

2.4 Ethical aspects

In observance of the Helsinki declaration that regulates research on human beings, the confidential nature of the data and anonymity were guaranteed so that the identification of the subjects of the study is presented following the coding by name of butterflies. The present study was approved by the Research Ethics Committee of the Federal University of Ceará under number 1,658,436.

3. Results

In the preoperative focus group, all eight subjects were married and Catholic women, aged 33 to 59 years and mean 41.1 years. Six were from urban area of Fortaleza, capital of Ceara, and two came from the interior of the State of Ceará. As for the occupation, seven had jobs and one was a housewife. Regarding schooling, five had completed high school, two had elementary school and one had higher education.

The average waiting time for surgery was 33 months with a variance between 12 and 48 months. It was observed that the eight participants were classified as morbidly obese with a mean weight of 121.9 kg, the minimum being 100 and the maximum 160 kg. Regarding the family history of obesity, five patients reported that their father or mother were obese. Six women had comorbidities and, of these six, five had hypertension and one osteoarthritis. It was found that five women sought the surgery as a treatment by indication of friends who had already performed the surgical procedure and three had medical indication.

From the qualitative analysis of the reports, five categories were defined: "Imagining what life will be like after the bariatric surgery"; "Fear and anxiety about performing the bariatric surgery"; "Preoperative preparation and follow-up in the health service"; "Resolution of doubts during the preoperative preparation" and "Main doubts of those who are still in the preoperative".

3.1 Category 1: Imagining what life will be like after the bariatric surgery

All individuals expect changes in their quality of life that range from being able to buy an outfit to going out to the movies.

"I have hope everything will change"(Rainbow Butterfly)

"It will be wonderful. I'll go back to the way it was before. I'll be able to wear the clothes I like. Enter a store and not have to ask for size G" (Butterfly Carnival)

"I hope I can walk straight and get out... I hope I can get ready"(Butterfly Owl)

"My dream is to be able to play barbie with my daughter on the floor" (Butterfly Cleopatra)

"I don't expect to get too thin because I've never been thin. I really want to go to the beach with my daughter. To be able to go to the movies. I never took my daughter to the movies because I'm afraid not to sit in the chair. Start going out with my husband, because I don't go out and he stays at home" (Golden Butterfly)

"I don't want to take any more medicine" (Peacock Butterfly)

The reports show how the obesity has a negative influence on the daily life of obese people, interfering directly in their sociability and restricting them not to leave home with their husband, not to go to the beach or sit on the floor with their children to play. Bariatric surgery represents the hope of a better life without privation, anguish or discrimination. The loss of weight makes it possible to be satisfied with daily activities that were previously oppressed due to the shame of the large obese body or the difficulty in mobility. Thus, the surgical procedure provides the achievement of a better quality of life with the improvement of the biopsychosocial state.

The desire to be able to choose any outfit when entering a store without going through the embarrassment of not having the size was also mentioned among the patients, who are very anxious to reveal this vain side. The cession of drug taking and the control of comorbidities is something expected after the surgery, and it is important that these patients be guided already in the preoperative about the improvement or resolution of diseases and the follow-up of clinical conditions. From the loss of weight, there is an improvement of the whole metabolism of the organism, which provides the reduction or cession of the use of medicines. It is necessary that the patients are conscious not to stop using the medicines on their own, and this choice should be made by the doctor through his evaluation.

3.2 Category 2: Fear and anxiety about performing bariatric surgery

It was observed the anxiety to perform the surgery soon is present in the reports of all participants and that the main

doubts and fears are related to the surgical center, how the surgery is performed and how is the anesthesia.

"I want to get thin soon to do my other surgery" (Silver Butterfly)

"I have no fear. I look forward to the surgery soon" (Rainbow Butterfly)

"I have doubts about the surgical methods, how is the postoperative... Fear of anesthesia, of the surgical center and of not being able to eat anymore" (Butterfly Bela Dama)

"I am not afraid. I wanted to know if you need to lose weight before the surgery" (Butterfly Carnival)

"My main fear is not to lose weight as expected and get fat again afterwards. I have doubts about how the surgery is done and the care we should have". (Golden Butterfly)

"After we operate, are there any medications we can't take anymore? My fear is the anesthesia and my desire is to get thin soon" (Butterfly Cleopatra)

"I'm afraid of having a bad time and not resisting, of having some complication and getting fat again"(Peacock Butterfly)

Another concern strongly present is the fear of weight gain and the occurrence of postoperative complications. Patients should be made clear about the return of excess weight in the late postoperative period, as this is currently the main reason for the long-term failure of the surgery, as over time many patients return to poor eating habits and abandon the practice of physical exercise.

3.3 Category 3: Preoperative preparation and follow-up in the health service

For preoperative patients, consultations with health professionals are essential to obtain information about perioperative care and to clarify doubts.

"You should always follow the doctors' recommendations and remove any doubts that may arise later" (Silver Butterfly)

"Orientations serve for the well being of patients" (Rainbow Butterfly)

"The accompaniment is important for the information that passes ... not to regain the weight again" (Butterfly Carnival)

"With the guidelines, we know what we must do in order not to take risks and succeed. With this accompaniment, mainly psychological, we can reach our goal" (Golden Butterfly)

"It is very important. You must follow everything they say" (Owl Butterfly)

"The orientations are great because we prepare ourselves to do the surgery and we get to know everything. It serves to make us aware that there are some risks" (Butterfly Cleopatra)

"All guidelines are of extreme necessity. Accompaniment afterwards is as important as preoperative, because we have to follow everything is spoken by professionals" (Butterfly Beautiful Lady)

"We have to follow the guidelines very straight. They help the patients to look good and keep the weight". (Peacock Butterfly)

The participation of consultations with professionals and meetings with other patients is important for those who are experiencing the preoperative, since this is the moment when the individual can share their doubts and receive correct guidance. It has been verified that some patients are already aware of the periodic return with the multiprofessional team after the surgery. This is a positive fact, because the withdrawal from the health service interrupts the monitoring of weight loss, improvement of comorbidities and quality of life as well as the occurrence of complications.

3.4 Category 4: Resolution of doubts during the preoperative preparation

Among the participants, there is a consensus that the meetings during the preoperative preparation represent a moment to clarify doubts:

"It is very important." (Peacock Butterfly)

"We have many doubts..." (Butterfly Carnival)

"Many people have a lot of doubt about everything that happens in surgery". (Rainbow Butterfly)

"It's important to stay updated" (Owl Butterfly)

"It's a very good idea because it's being done by professionals. Because sometimes we have doubts and we will ask others and each one speaks a different experience. I get confused and have more doubts..." (Golden Butterfly)

"It's great for those who are going to join the program." (Butterfly Beautiful Lady)

During the preoperative, the load of knowledge obtained is great in a short period of time, which allows the emergence of many doubts as the individual receives information about the surgical procedure and the care for each specialty in the health area that makes up the multiprofessional team. Thus, the preoperative preparation is seen as a tool to obtain more knowledge about the surgical procedure.

One participant reported she gets more confused when clearing her doubts with other patients. It is known that each individual experiences the postoperative in a different way, and sometimes it is not feasible to follow the advice of other people who have already undergone surgery, because the conduct will not always be the same for both. Facing this situation, it is fundamental to emphasize the need to seek health professionals when there is some intercurrence.

3.5 Category 5: Main doubts of who is still in the preoperative

In a general way, all the subjects wanted to know everything about the bariatric surgery, surgical techniques and the func-

tion of each professional in the team. Information about the intragastric balloon as indication, risks and complications were also requested. Generally, in the service under study, the balloon is placed on superobese individuals who need to lose more than 10% of their current weight in order to perform the surgery later.

"What can you do at home, how long can you start exercising and dating?" (Butterfly Carnival)

"All about bariatric surgery. What we can and cannot do. I wanted to see the size of the plastic surgery scar" (Rainbow Butterfly)

"Placing the function of each professional in the bariatric surgery team a." (Butterfly Beautiful Lady)

"I wanted to know a little about the types of surgery" (Owl Butterfly)

"What's the leg bandage like? It scares to know it's going to happen." (Peacock Butterfly) "Explain what intubation is like. There was a friend of mine who gave up when she knew she was going to be intubated. She wanted to know how it was done." (Butterfly Cleopatra)

"Talk about the balloon and the indication of its use, what are the complications of the surgery and risks in relation to the intragastric balloon". (Golden Butterfly)

In the reports, it is observed that the main focus is the moment of the surgical center as the bandaging of the legs and the process of intubation. One patient reported that a colleague had given up the surgery due to fear of being intubated and dying. The identification of this situation is important for the professionals who guide about the transoperative, and they should be attentive to solve all the doubts.

4. Discussion

The present study made it possible to understand the perceptions of patients awaiting bariatric surgery about education in perioperative health, as well as to identify their main doubts, desires and possible benefits of an educational booklet about perioperative care. It was highlighted a profile composed mostly of married women, with average age and weight of 41.1 years and 121.9 kg, respectively.

A study conducted in the State of Pernambuco, Brazil, with 60 candidates for bariatric surgery, also revealed a sample composed mainly of female participants, with mean age of 38.8 years and mean BMI of 47.3 kg/m^2.[12] In addition, baseline results of a randomized clinical trial protocol with 157 patients on the waiting list for bariatric surgery highlighted a profile composed predominantly of women with mean age, weight and BMI of 37.9 years, 123.3 kg and 46.0 kg/m^2, respectively.[13]

These results shows that women represent one of the groups most affected by obesity, as well as the public that seeks the most to perform bariatric surgery, mainly due to health problems, prejudice, stress and discontent with physical appearance.[14,15] This reveals that nurses should expand strategies to promote women's health, but also focus on the health of men who still seek little health services, in order to empower them on good self-care practices, from obesity prevention to the segment of therapy chosen to treat this morbidity.[16]

In this sense, it is highlighted that patients who seek bariatric surgery experience several doubts, concerns and expectations related to the procedure, principally because of the queue. In this study, an average waiting time of 33 months was found, and the participants' speeches highlighted their anxieties and concerns related to overweight and the surgical procedure, such as repercussions on socialization; anxieties to perform the surgery soon and fear of complications. Besides, desires for positive changes, such as weight reduction and improved participation and social reintegration were reported, results that are fundamental to provide improved quality of life in physical, social and emotional aspects.

In another study conducted in Medellin, Colombia, with 23 individuals undergoing bariatric surgery, it was revealed that the main reasons for patients to seek this therapeutic method were related to the existence of physical and emotional changes, comorbidities, social and family pressure, which triggers the impact on the biopsychosocial aspects of patients resulting from obesity.[17]

In agreement, a study conducted in São Paulo, Brazil, investigated some paths took by patients along the SUS to perform bariatric surgery. The study showed a waiting time from 15 days to nine years, which the participants highlighted that the stay in the waiting queue resulted in anxiety and anguish related to the surgical procedure, fear of complications, weight gain, and worsening of health status. Regarding the trajectory traveled by these subjects, weaknesses were identified in the referral by Primary Health Care professionals, a situation that compromises the integral and continuous care during the treatment.[18]

In addition, a study conducted in Canada with patients queued for bariatric surgery, also identified feelings of anxiety, frustration and concerns arising from waiting time for the procedure, as well as feelings of motivation to lose weight and improve quality of life. The patients addressed the need to provide more information about the surgery and waiting queue.[19]

These findings reveal there are still discontinuities and iniquities of access to information and preoperative preparation for bariatric surgery. Therefore, it is important to extend the

perioperative multiprofessional follow-up in order to provide integral and longitudinal health care, as well as to facilitate the emotional and psychological resilience capacity, and the self-care of the patients in order to prevent complications in the health state and promote weight and diet control.

Studies also point out the identification of priorities and actions to increase the patients' treatment coverage, the establishment of strategies such as a critical evaluation by managers and health professionals of the gaps present in the providing of care, the accomplishment of preoperative health education and the promotion of the patients' involvement and active participation in support groups with nutritionist accompaniment to help in weight control, can help in the reduction of waiting time, in the expansion of the access to bariatric surgery and in the optimization of the patients' adequate preparation.[20]

In this perspective, regarding the perception of the participants of this study about the preoperative preparation, it was identified that they demonstrated to recognize as important the guidance provided by professionals for acquisition of information and clarification of doubts, but also consented as indispensable the follow-up after the surgery.

Such findings corroborated with those of research conducted in the State of Paraná, Brazil, which verified that the participants of the study also recognized the importance of the orientations and referrals made by health professionals, which positively influenced the choice to perform bariatric surgery and the access to knowledge and adequate self-care practices.[21]

A study conducted in the South of Brazil, with patients in the preoperative period of bariatric surgery, highlighted that the participants recognized what pre and postoperative care they should have, revealing that the guidance provided by professionals were fundamental to empower them and optimize their preparation. Faced with the numerous information available and communication failures, in the same study, the patients also suggested that communication about the treatment process should occur not only through oral but also written information, to facilitate the effective acquisition of all necessary information.[22]

Therefore, it is clear it is necessary to individualize the provision of information in order to meet the emotional, social and cultural perspectives of the subjects and enable effective communication, considering the precarious access to health information is a conditioning factor of the self-care process of people, contributing to the development of inappropriate behaviors and the emergence of health problems.[21] Therefore, the correct follow-up of the recommendations is essential to proceed with the surgery, and adequate training of patients should be promoted to avoid possible complications or delays.

In this context, educational technologies can be effective in the health education of these individuals, as identified in the speeches of the participants of this study, whose perceptions show that an educational primer can facilitate the acquisition of knowledge and resolution of doubts. In agreement with the speeches of the participants, results obtained in a quasi-experimental study carried out in the State of Ceará, with 55 candidates to bariatric surgery, through an educational primer, evidenced benefits in the learning of the patients, since the technology contributes to the reduction of obesity indicators such as weight, BMI, abdominal circumference and Percentage of Excess Weight.[16]

Regarding the doubts of the participants of this study about bariatric surgery, the information related to the surgical procedure was highlighted, but also about postoperative care such as the practice of physical exercises and resumption of sexual activity, themes that represent some of the main doubts of the subjects about the surgery.

Another study also conducted in the State of Ceará, Brazil, found similar doubts of the participants, mainly related to the postoperative period, such as postoperative care, exercise and possible complications, types of surgical techniques, family participation, intubation process and use of contraceptives.[23] Another research found the main doubts and concerns of participants about the care of the surgical wound and drains, and post-surgical diet.[22]

These knowledge needs are common to bariatric surgery patients and can guide the formulation of technologies and educational interventions for health promotion focused on what patients have the greatest knowledge deficit and greatest dependence on professional support. Therefore, multiprofessional assistance, especially nursing care, based on behaviors and educational technologies can enable the removal of doubts, provide appropriate guidance aimed at promoting self-efficacy of patients in their self-care and improve the psychological and physical preparation of subjects, enabling better facing and recovery from treatment.

As limitations of this study, the sample composed only of women is pointed out, which prevented the identification of the perception of male patients about education in perioperative health, since they may present different views about obesity and bariatric surgery, as well as may have other needs of knowledge.

5. Conclusion

This study identified a sample composed predominantly of women with morbid obesity and a mean weight of 121.9 kg. It was evident that the participants recognized the importance of preoperative follow-up in preparing for bariatric surgery to acquire knowledge and clarify doubts. Among the main doubts that the patients reported there was information related to the aspects that permeate the surgical procedure and postoperative care.

Therefore, before the patients' perceptions about the perioperative education, expectations, desires and doubts about the bariatric surgery, it is expected to stimulate the development of new studies that seek to build and validate educational technologies about perioperative care of bariatric surgery, as well as psychological intervention studies and/or focused on the promotion of self-care of patients who undergo surgery, based on these findings.

Conflicts of Interest Disclosure

The authors declare there is no conflict of interest.

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