

## Quality of Life in Patients with Obesity and Intestinal Stomas

Alegre Salles VJ<sup>1\*</sup> and Garcia MS<sup>2</sup>

<sup>1</sup>Department of Medicine, University of Taubaté, Brazil

<sup>2</sup>Department of Intensive Care, University of Taubaté, Brazil

\*Corresponding author

Valdemir José Alegre Salles, Department of Medicine, University of Taubaté, José Bonani, Taubaté, São Paulo, Brazil

E-mail: [vjasia@gmail.com](mailto:vjasia@gmail.com); Tel: +55-15-12-3681-3888; Fax: +55-15-12-3631-6061

### Abstract

**Purpose:** Complications of intestinal stomas associated with obesity may impact on the patient's quality of life. We want to characterize the factors that modify the quality of life in individuals with both characteristics, as well as to rethink the importance of a precision stoma construction in the prevention of complications.

**Methods:** Cross-sectional, observational and qualitative study. Patients have intestinal stoma, BMI $\geq$ 30 kg/m<sup>2</sup> and WC $\geq$ 90 cm for men and  $\geq$ 80 cm for women. Two questionnaires were applied, about personal and medical info and the Stoma Quality of Life (Stoma-QoL).

**Results:** The quality of life in patients with colostomy issue prior to that of ileostomy, obtaining 58.2 and 52.5 points in the questionnaire, respectively. The presence of central obesity is an important factor in the development of complications, such as parastomal hernia and dermatitis, because it influences the intestinal stoma construction and its self-care. Urgent surgery is also a contributing factor to decrease well-being, given that this scenario provides a higher incidence of complications.

**Conclusion:** Intestinal stomas have physical and emotional consequences and the presence of obesity can increase the impact on the well-being of this individual. It is always necessary to have a right surgical schedule, even in emergency situations, considering that the good quality of life of this patient starts in the operative act.

**Keywords:** Intestinal stomas; Colostomy; Ileostomy; Quality of life; Obesity

### Introduction

Intestinal stoma is an opening made with the purpose of intestinal transit by-pass and externalized to the abdominal wall, being either an ileostomy or a colostomy [1]. The stoma can be temporary or permanent and, in most cases, colorectal cancer is the main cause [2]. Not only is the rate of ostomized patients increasing, but also obesity is pandemic. Between 1980 and 2013, it is estimated that there was a growth of more than 25% in the incidence of adults with obesity and overweight, for each sex, in the world [3].

The association of obesity with intestinal stomas causes a tendency in the individual to have a greater impact on their quality of life [4]. Such a fact is corroborated by the changes noted in self-image resulting from the ostomy itself and its complications, some of which, such as parastomal hernia, affect more patients with overweight [2,4].

Parastomal hernia is a type of incisional hernia which arises from ostomy construction sites and is influenced by its position and the size of the fascia opening. This condition affects more people with central obesity due to the increase of intra-abdominal pressure and the enlarged diameter of the abdominal cavity, and it can cause difficulty in handling, irrigation problems and pain around the ostomy [5]. Therefore, through this study, we aim to analyze and list the factors that influence the quality of life in the individual with both conditions, as well as reassess the importance of the perfect stoma construction in preventing complications.

### Material and Methods

This is a cross-sectional, observational and qualitative study. A convenience sampling of 14 patients was recruited from a tertiary hospital in the state of São Paulo, who is linked to ostomy support groups. These participants are adults with intestinal stomas and have a Body Mass Index (BMI)  $\geq$  30 kg/m<sup>2</sup> and Waist Circumference (WC)  $\geq$  90 cm for men and  $\geq$  80 cm for women.

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As evaluation criteria, two questionnaires were applied, about personal and medical info, elaborated by the authors, and the Stoma Quality of Life (Stoma-QoL). This latter questionnaire contains twenty questions that address important topics about personal well-being, such as sleep, sexual activity and social relationships with family and friends. The answers are graded from 1 to 4 points which correspond, respectively, to the options "always", "sometimes", "rarely" and "never". The result varies from 20 to 80 points and, the higher the value, the better the quality of life. The data were tabulated by the Google Spread sheets app, presented through tables and figures, as well as compared with the scientific literature.

## Results

The inter viewers totalized 14 patients with intestinal stomas, 6 are male and 8 female, with an average age of 61 years. The BMI and WC means were 31.4 kg/m<sup>2</sup> and 118.8 cm for men and 111.8 cm for women. Between the co morbidities that affect the patients, most of them are associated with obesity and metabolic syndrome, as arterial hypertension, diabetes mellitus and hypercholesterolemia, which are predominant, affecting 57%, 29%, 29%, respectively.

Regarding the type of stoma, 10(71%) had colostomy and 4(29%) had ileostomy, with 57% of the total having a permanent and 43% a temporary stoma. Bypass surgeries were performed in most individuals (71%) more than a year ago. The cause that most determined the need for this surgery was colorectal cancer followed by acute abdomen and inflammatory bowel disease, whose total surgeries were, performed 50% on an emergency basis and 50% electives scenario. Considering the ostomy complications, parastomal hernia was the most prevalent, occurring in 10 patients (70%), followed by dermatitis.

Based on the Stoma-QoL questionnaire, it was possible to know the individual's relationship with his own ostomy and the way that this condition influences his daily life. In general, the mean score obtained by patients with colostomy was higher than with ileostomy, with 58.2 and 52.5 points, respectively, and only the last group reported low quality of life.

About the questionnaire topics, some of them highlighted the incidence of "always" and "never" responses, which indicate poor and good quality of life, respectively. These and other findings can be seen in When both emergency and elective surgeries are compared, it was observed that there was a slight difference in quality of life between them, as well as in the incidence of dermatitis and stenosis in these scenarios (Table1).

## Discussion

The presence of a colostomy or ileostomy is a condition that can interfere in the emotional and social aspects and, thus, negatively may impact a patient's quality of life [6-8]. This fact is more evident if the patient has obesity and develops stoma complications, as well as the type and situation in which the surgery was performed.

The interviewers are linked to support groups for ostomized patients, whose affectional bonds formed contribute to personal well-being. A retrospective study defends the existence of these specialized centers with associates and stoma therapists, because in addition

**Table 1:** Stoma-QoLs Main questions.

<b>Questions with predominantly answers "always"</b>
I become anxious when the pouch is full (79%)
I feel the need to know where the nearest toilet is (71%)
<b>Questions with predominantly answers "never"</b>
I am afraid to meeting new people (86%)
My stoma makes it difficult for me to be with other people (79%)
<b>Question with answers only "always" or "never", being "never" more prevalent for both</b>
"My stoma makes me feels sexually unattractive" (64%)
I feel embarrassed about my body because of my stoma" (79%)
Question with more variable answers-"always", "sometimes" and "never" (29%) and "rarely" (14%)
"My stoma pouch limits the choice of clothes that I can wear"

to psycho-emotional support, nurses contribute to ostomy self-care education and right nutrition diet, which together provides positive feelings due to welcoming sentiments and mental health benefits in consequence. Therefore, it can be a very useful tool in the individual adaptation process of the new lifestyle, helping the patient to not feel anxious or ashamed and avoid self-social isolation [7,8].

Based on the questionnaires core, our research demonstrated the patient with colostomy has a better quality of life than that with ileostomy. Although the latter presents as an advantage the fact that the effluent is more tolerable and, therefore, less negative impact on the sense of personal hygiene, the former provides better nights of sleep. Colostomy generates more formed and less liquid stools, especially if it is built in the left colon, which provides better night's sleep, because it is not so frequently wakeup to empty the pouch. The comparative study addressed the quality of life in 25 patients withal ostomy and 25 with colostomy in a specific questionnaire, and concluded that both harm the individual's daily life activities, emphasizing that the ileostomy better preserves the proper sense of cleanliness and appetite [9].

The same important survey also showed that colostomy has less impact on sexual relationships, because 52% started to have sexual abstinence against 72% of the other group [9]. Our study also pointed out that 50% of patients with ileostomy do not feel sexually attractive when they answered "always" to this question, in parallel to 20% of answers "always" and 10% "sometimes" of those with colostomy. All of them who had difficulty in keeping their sexual life also reported feeling embarrassed of their own body due to the presence of the stoma.

About the possible complications, a retrospective study followed 41 patients with colostomy in the postoperative period and observed that, in up to two and a half years, those with WC greaterthan100 cm had a 75% probability of developing parastomal hernia. WC and BMI were crucial characteristics for its appearance, being the former considered as an independent risk factor and of greater significance [5]. Our data showed a WC mean of 115 cm and parastomal hernia stood out as the most prevalent complication, present in 70% of individuals with colostomy and in 75% of those with ileostomy.

The second most common complication was peristomal dermatitis with 50% of total cases. This typical dermatological lesion may be more prevalent in patients with obesity due to the difficulty in handling their ostomy and worse pouch adherence, because of the high WC [10]. So, it is necessary to replace it more often, being an important risk factor

for wounds. Such device inability still predisposes to the excrement leakage, worsening skin lesions [1,11].

Another important factor is whether the surgery was urgent or elective. Our research showed a slight difference in the score regarding quality of life in both situations, but there was a higher prevalence of complications in the emergency condition. Elective patients obtained a mean of 57 points in Stoma-QoL and 28% of them developed dermatitis, against a mean of 56 points and 71% with the skin lesion in urgent ones. A descriptive analysis highlighted that there was a greater prevalence of complications in urgent performances than in previously scheduled ones, with 35% and 30%, respectively [11]. It is noteworthy that the stoma site demarcation by a trained team of surgeons or an experienced stoma therapist in the preoperative counseling [12], in order to avoid areas of skin folds, scars or bony prominences is absolutely essential for a better quality of that individual's life, even in an emergency situation [11]. Another relevant issue, regarding the impact of well-being, is when the surgery is performed by a trauma team with subsequent follow-up of general surgery, areas with different approaches and techniques. Furthermore, the emergency intestinal stoma may become permanent depending on the patient's disease and clinical conditions, making indispensable a greater attention to its construction, despite the scenario [12].

Still comparing the situations, the observational study by Braumann et.al [12] with 2546 ostomy patients with or without obesity reported that the complication rate of individuals with BMI  $\geq 30$  (n = 2110) was 89% in urgent surgery and 67% in the elective one. At the same time, 49% of those with normal BMI had complications, with rates of 53% in the emergency and 46% in the programmed condition. It was observed that more pronounced BMI values postulated both greater complications severity and higher prevalence, especially in obesity class III [12].

## Conclusion

Although it is a limited study by its observational nature and reduced casuistry, the analysis of our data allows us to highlight that the individual with colostomy or ileostomy in variably suffers physical, emotional and psychosocial consequences. Furthermore, when obesity is associated with this clinical condition, the decline in quality of life may become more pronounced. The higher the WC, the greater

the probability of complications such as parastomal hernia, feared for changing the physical appearance and for impairing the pouch adhesion, damaging the skin. In addition, it is remarkable that central obesity corroborating difficulty in proper intestinal stoma construction, as in emergency basis. Proper techniques minimize future risks from stoma functionality. According to all exposed above, we can finish our study with the following thought: "The quality of life in patients with ostomy begins in the operating room".

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