

Journal of  
Coloproctology[www.jcol.org.br](http://www.jcol.org.br)

## Original Article

Profile of ostomy patients residing  
in Pouso Alegre city

Geraldo Magela Salomé\*, Maiume Roana Ferreira Carvalho,  
Marcelo Renato Massahud Junior, Bruno Mendes

Universidade do Vale do Sapucaí (UNIVÁS), Pouso Alegre, MG, Brazil

## ARTICLE INFO

## Article history:

Received 6 January 2015

Accepted 20 February 2015

Available online 8 April 2015

## Keywords:

Stoma

Colostomy

Nursing care

## ABSTRACT

The objective was to characterize the clientele of ostomy patients living in Pouso Alegre, Minas Gerais, Brazil. Among the causes that led patients to acquire an ostomy, the most prevalent was neoplasia; the type of ostomy was a permanent colostomy. Most people were not told that they would be submitted to the stoma. In addition, individuals were not subject to stoma demarcation, and irrigation was not performed. Regarding the type of complication, 34 (48.60%) had dermatitis; 14 (20%), retraction; and 13 (18.60%), prolapse. With respect to stoma diameter, 34 (48.60%) had 20–40 mm and 23 (32.90%), 40–60 mm. With this study, we became aware of the profile of ostomized patients treated at the municipality of Pouso Alegre/MG; it is expected that, with these data, the improvement of care to this population can be subsidized. We suggest that nursing professionals think of health action strategies with respect to guidance on stoma manufacture and to measures aiming for the prevention of possible complications, promoting ways to help these patients to make decisions and to verbalize feelings, so that they feel supported in coping with changes in their body image, for the sake of survival.

© 2015 Sociedade Brasileira de Coloproctologia. Published by Elsevier Editora Ltda. All rights reserved.

## Perfil dos pacientes estomizados residentes no município de Pouso Alegre

## RESUMO

O objetivo foi caracterizar a clientela de estomizados residentes em Pouso Alegre, Minas Gerais. maioria das causas que levaram os pacientes a adquirir ostomia foi neoplasia; o tipo de ostomia era colostomia em definitivo. A maioria dos indivíduos não foram comunicados de que seriam submetidos ao estoma. Além disso, os indivíduos não foram submetidos à demarcação do estoma e não foi realizada irrigação. Com relação ao tipo de complicação, 34(48,60%) apresentaram dermatite; 14 (20%), retração e 13 (18,60%), prolapso. Com relação ao diâmetro do estoma, 34 (48,60%) mensuravam 20 a 40 mm e 23 (32,90%), 40 a 60 mm. Este estudo possibilitou conhecer o perfil dos pacientes ostomizados atendidos do município

## Palavras-chave:

Estoma

Colostomia

Cuidado de enfermagem

\* Corresponding author.

E-mail: [salomereiki@yahoo.com.br](mailto:salomereiki@yahoo.com.br) (G.M. Salomé).

<http://dx.doi.org/10.1016/j.jcol.2015.02.002>

2237-9363/© 2015 Sociedade Brasileira de Coloproctologia. Published by Elsevier Editora Ltda. All rights reserved.

de Pouso Alegre/MG e espera-se que, com esses dados, se possa subsidiar a melhoria da assistência a essa clientela. Sugere-se aqui aos enfermeiros pensar em estratégias de ações de saúde com relação às orientações sobre a confecção do estoma, medidas de prevenção de possíveis complicações, promovendo meios para auxiliar esses pacientes a tomarem decisões, verbalizarem sentimentos, de modo que se sintam apoiados no enfrentamento das mudanças da sua imagem corporal em prol da sobrevivência.

© 2015 Sociedade Brasileira de Coloproctologia. Publicado por Elsevier Editora Ltda.

Todos os direitos reservados.

## Introduction

An ostomized person is an individual who is subjected to an operation which results in the production of a stoma. The term ostomy or stoma comes from the Greek word “stoma” and means an opening of a new mouth surgically constructed, aiming externalizing any existing hollow viscera in the body. It is therefore an artificial communication between organs or viscera toward the external environment. With an ostomy, we seek the accomplishment of drainage, elimination, or nutrition. This stoma can still be temporary or permanent, depending on the cause and purpose for which the device was surgically constructed. An intestinal stoma is indicated when some bowel segment presents dysfunction, obstruction or injury. The stoma is named after the bowel segment, and may be an ileostomy, colostomy or cecostomy.<sup>1,2</sup>

The care of people with an intestinal stoma should be done through humanized care and evaluation of their clinical conditions, through physical examination and a medical history, with appreciation of the patient's verbal and nonverbal reports. Thus, it is necessary to systematize the care to these ostomized individuals. This kind of care enables promoting patient rehabilitation and minimizing his/her suffering, especially by encouraging self-care. Thus, it is necessary to systematize assistance to these ostomized individuals. This assistance enables promoting patient rehabilitation and minimizing his/her suffering, especially by encouraging self-care. This strategy does not allow that beliefs and taboos become threats to their physical, social and psychological integrity. This care also aims to suppress the fear of performing self-care.<sup>3-7</sup>

When a ostomized patient receives inadequate care, this may cause various complications, especially in the stoma and peristomal skin, e.g., skin lesions at various levels, herniation, infection, stenosis, prolapse, and retraction, among others.<sup>6-8</sup> Usually, complications with the stoma are related to non-compliance with important technical procedures, namely: a previous demarcation of the site in the abdominal area where the stoma will be externalized, the surgical technique for the preparation of the intestinal loop to be externalized, early maturation, and the use of a collector device suitable for the type of stoma selected.<sup>9</sup>

Complications related to the stoma and the difficulty of the patient to perform self-care are the main factors involved in his/her rehabilitation; the nursing care should have its start at the very time of diagnosis and indication of surgery, seeking to minimize suffering and get a better adaptation of the patient. Thus, the emphasis on self-care has been described

as an alternative to enable the patient to actively participate in his/her own care, stimulating the responsibility for the continuity of care after the discharge, which will contribute to the rehabilitation process, minimizing or avoiding the complications described above.<sup>10</sup>

Given the few published studies on patients seen and the knowledge gap on the real needs of these ostomized people, we set ourselves to develop this study. We believe that our results may provide support for care systematization and for the development of care protocols that aim to an early rehabilitation of this population. Our aim was to characterize the population of ostomized people living in Pouso Alegre, Minas Gerais, Brazil.

## Method

This is a descriptive study on intestinal stoma patients living in Pouso Alegre, Minas Gerais, and registered in the *Programa de Atenção à Pessoa Ostomizada* in Pouso Alegre. Data were collected between December 2012 and May 2013, after approval by the Research Ethics Committee of the Universidade do Vale do Sapucaí (opinion No. 23,277). The sample consisted of 70 participants, selected non-probabilistically by convenience.

All ostomized patients agreed to participate in this study and signed a free and informed consent. Participants had assurance of full exemption of risks and of anonymity.

Our inclusion criteria were: the subject must be an intestinal stoma user, and be aware, alert, oriented, and agreeing to participate in this study. The exclusion criteria were: patients with urinary or other kind of stoma. A semi-structured interview was conducted with the use of a form containing open questions. These questions were divided into: identification data, socio-demographic aspects, stoma description, complications, and devices in use.

Data were tabulated and organized into graphs and tables using the Excel 2003 program; then a descriptive analysis was performed. The chi-squared test was also used. The significance level for statistical tests was 5% ( $p \leq 0.05$ ).

## Results

In Table 1, it was found that most participants stood in the age group over 60, were male, retired, and attending to a support group. Twenty-one (30%) of our participants were illiterate and 19 (25.10%) could read and write.

Table 2 describes that cancer was the leading cause for osteotomy acquisition, and that the ostomy used was of a

**Table 1 – Socio-demographic characteristics of individuals with intestinal stoma.**

Gender	P	N	% overall	% valid	% pooled
Male	0.003	52	74.3	74.3	100
Female		18	25.7	25.7	25.7
Total		70	100	100	
Variable					
Age groups	P	n	% overall	% valid	% pooled
44–59 years	0.057	17	24.3	24.3	24.3
60–67 years		18	25.7	25.7	50
68–74 years		16	22.9	22.9	72.9
75–85 years		19	27.1	27.1	100
Total		70	100	100	
Variable					
Marital status	P	N	% overall	% valid	% pooled
Married	0.035	34	48.6	48.6	48.6
Separated		14	20	20	68.6
Widow(er)		22	31.4	31.4	100
Total		70	100	100	
Variable					
Occupation	p	N	% overall	% valid	% pooled
Retired	0.003	50	71.4	73.5	73.5
Unemployed		4	5.7	5.9	79.4
Working		14	20	20.6	100
Total		68	97.7	100	
No response		2	2.9		
Total		70	100		
Variable					
Support group/association	p	N	% overall	% valid	% pooled
Yes	0.075	38	54.3	54.3	54.3
No		32	45.7	45.7	100
Total		70	100	100	
Total		70	100	100	

Chi-squared test ( $p \leq 0.05$ ).

permanent colostomy type. Most of the participants had not been told that they would receive the stoma. Moreover, no stoma demarcation had been made, and no stoma irrigation was performed. Regarding the type of complication, 34 (48.60%) patients had dermatitis; 14 (20%), retraction; and 13 (18.60%), prolapse. With respect to stoma diameter, 34 (48.60%) had a 20–40 mm stoma, and 23 (32.90%) a 40–60 mm stoma.

## Discussion

The increase in life expectancy, the industrialization process and the effects of urbanization resulted in more exposition of the Brazilian population to numerous diseases, among which stand out the cancer, trauma and chronic degenerative diseases. Thus, in many circumstances the use of technological resources, such as implant prosthetics and orthotics, is critical in order to save lives or to allow a better quality of life.<sup>10</sup> Technological progress and the improvement of surgical techniques contributed strongly for the early diagnosis of diseases in hollow organs that require externalization to perform their

functions, therefore improving the quality of life and the rehabilitative process.<sup>11</sup>

Our results showed that, of the 70 ostomized patients, 52 (74.30%) were male. These results coincide with some similar findings found by previous studies.<sup>12–16</sup>

As for marital status, the study showed that married patients prevailed, i.e. 34 (48.60%), followed by 22 (31.40%) widowed and 14 (20.00%) separated subjects. This result highlights the importance of family involvement, especially of the spouse, in the recovery of the ostomized patient.

It should be borne in mind that the gender of an ostomized subject may influence its social adaptation. Women tend to require less time for rehabilitation, although demonstrating significant degrees of despair, depression and fear in the pre-operative period. On the other hand, men, especially those who develop impotence, take a longer time to respond satisfactorily to routine activities, including presenting more pronounced difficulties for self-care.<sup>17</sup>

Some national and international studies show that single, widowed and separated ostomized individuals face greater difficulty in revealing to a possible sexual partner their

**Table 2 – Distribution of individuals according to bowel stoma characteristics.**

Variable	P	N	% overall	% valid	% pooled
Cause of ostomy					
Diverticulitis	0.003	3	4.3	4.3	4.3
Inflammatory bowel disease		5	7.1	7.1	11.4
Neoplasia		52	74.3	74.3	85.7
Crohn's disease		10	14.3	14.3	100
Total		70	100	100	
Variable					
Stoma type	P	N	% overall	% valid	% pooled
Colostomy	0.007	54	77.1	77.1	77.1
Ileostomy		16	22.9	22.9	100
Total		70	100	100	
Variable					
Stoma diameter	P	N	% overall	% valid	% pooled
0–20 mm	0.056	10	14.3	14.3	14.3
20–40 mm		34	48.6	48.6	62.9
40–60 mm		23	32.9	32.9	95.7
60–80 mm		3	4.3	4.3	100
Total		70	100	100	
Variable					
Type of complication	P	N	% overall	% valid	% pooled
Dermatitis	0.0023	34	48.6	48.6	48.6
Fistula		1	1.4	1.4	50
Peristomal hernia		5	7.1	7.1	57.1
Pseudo-verrucous lesion		1	1.4	1.4	58.6
Allergic reaction to device		1	1.4	1.4	60
Pseudo-verrucous lesion/dermatitis		1	1.4	1.4	61.4
Retraction		14	20	20	81.4
Prolapse		13	18.6	18.6	100
Total		70	100	100	
Variable					
A demarcation was performed?	P	N	% overall	% valid	% pooled
Yes	0.002	17	24.3	24.3	24.3
No		53	75.7	75.7	100
Total		70	100	100	
Variable					
Type of device	P	n	% overall	% valid	% pooled
Single system	0.043	22	31.4	31.4	31.4
Two-part system		48	68.6	68.6	100
Total		70	100	100	
Variable					
Irrigation was performed?	P	n	% overall	% valid	% pooled
Yes	0.047	26	37.1	37.1	37.1
No		44	62.9	62.9	100
Total		70	100	100	
Variable					
You were told that you would have a stoma?	P	n	% overall	% valid	% pooled
Yes	0.049	48	68.6	68.6	68.6
No		22	31.4	31.4	100
Total		70	100	100	

**Table 2 – (Continued)**

Variable	P	n	% overall	% valid	% pooled
Character of stoma					
Temporary	0.003	18	25.7	25.7	25.7
Permanent		52	74.3	74.3	100
Total		70	100	100	
Variable					
Schooling	P	N	% overall	% valid	% pooled
Complete elementary education	0.003	8	11.43	11.43	11.43
Incomplete elementary education		2	2.85	2.85	2.85
Complete high school		6	8.6	8.6	8.6
Incomplete high school		7	10	10	10
Illiterate		47	67.14	67.14	100
Total		70	100	100	
Chi-squared test ( $p \leq 0.05$ ).					

modified body image, and find it difficult to engage in extra-marital relationships after surgery, adding that only their spouses accept physical contact. These data agree with a study that studied affected sexuality in patients with a recent stoma, when without a permanent sexual partner, because they feel insecure, ashamed, and afraid of not being accepted by the partner.<sup>18–23</sup> This support is critical, because when the patient is subjected to the construction of a stoma, soon restrictions arise about his/her sexual life. The ostomized individual begins to see the ostomy as an anatomical mutilation. Thus, the family is now essential to the implementation of a therapeutic, rehabilitative and social reintegration plan.

As to age group, the population over 60 years was the most affected. In this finding, is important to emphasize that the elderly have unique biological characteristics and are more vulnerable to chronic degenerative diseases, i.e. neoplasms. Meirelles and Ferraz<sup>13</sup> claim that the occurrence of complications in the stoma is multifactorial, involving stoma construction and its location and also the patient's obesity, with influence of the age factor. Thus, when these factors are considered together with physiological changes of aging, the result is a greater vulnerability of the elderly in the incidence of stoma complications.<sup>24</sup>

Regarding the level of education, it was noted that most, i.e. 47 (67.14%) patients, were illiterate. This finding reveals a worrying profile, when thinking in terms of citizenship and respect for individual rights, because it is known that the lower the educational level, the more unfavorable is the linguistic capital of the subjects, so that they can ask professionals about their health problems, the care that should be carried out and also about their inherent rights as citizens. It is worth mentioning that this does not interfere with the care of these people, because the interaction between user, service and health professional has managed to overcome the difficulties posed by this variable.<sup>25</sup>

Analyzing the participants' occupation, it was observed that "retiree" was the professional status that stood out in this study group: 50 (71.40%), followed by "actively working", 14 (20.00%). These findings are in line with data from other studies.<sup>1,2,6,8,11,13,15</sup> One of the social consequences for ostomized patients is a change in their role and social status,

both in their family and in society. After surgery, it is common for the ostomized patient (that was working) a change for a retired status. Thus, the ostomized individual is no longer the family provider, thus becoming dependent on it for his/her care.<sup>9</sup>

In this study, the investigators reported that the externalized intestinal segments were colostomies and that, as to loop externalization time, the ostomies were definitive. In 52 patients (74.30%), the causes for making the stoma were attributed to cancer; and most stomata had a diameter of 20–40 mm; these findings are consistent with other studies' findings.<sup>3,8–13,26–28</sup>

It is worth noting that the permanency time with the stoma depends on the causal factor and of the clinical outcome after its making. Thus, an initially temporary stoma may become permanent, depending on the drawbacks to intestinal transit restoration, because in many cases the gastrointestinal tract diseases lead to a radical surgery, resulting in a temporary, or even permanent, ostomy.<sup>15</sup> Regarding the type of system, 48 (68.60%) of the patients used two-piece devices, while in 44 (62.90%) irrigation was not performed.

It is worth noting that when patients were asked about demarcation implementation preoperatively, most of them reported that this procedure had not been done. Demarcation is extremely important, given that a convenient location facilitates self-care and the rehabilitative process. Therefore, when performing the physical examination, the health professional must be aware of the stoma positioning site, and the demarcation of the stoma should be made preoperatively, in order to prevent or minimize possible complications in the stoma and peristomal region. It is also critical that, at that time, the nurse give guidance both to the patient and to his/her family about self-care.<sup>3,8,9</sup>

Another study looked into the knowledge of ostomized patients in relation to their care after discharge, and on the incidence of complications related to the stoma. This was an exploratory and qualitative field study with quantitative data input, where a semi-structured interview was used as data collection technique. Ten patients with intestinal ostomy (colostomy/ileostomy) were interviewed and the results showed that most patients had difficulties with



self-care, due to lack of proper guidance and/or assistance of a skilled professional during this phase of treatment.<sup>10</sup>

Regarding complications, 36 (48.60%) patients had dermatitis; 14 (20.00%), retraction; and 13 (18.60%) prolapse. In addition, 48 (68.60%) patients were not told they would receive an intestinal stoma. One should also consider that the incidence of some complications increases with age and in patients without stoma demarcation. Considering that the demarcation was not performed in this study population (predominantly made up of older people), it can be said that this fact represented one of the factors that may have contributed to the occurrence of complications such as those cited, thus confirming the findings in other studies.

Usually, dermatitides are lesions due to an inappropriate use of collector devices, more precisely by an excessive cutting of the hole of the protective barrier, relative to the stoma (this error leaves the skin exposed to the effluent action), or by an inadequate indication of the equipment to the type of stoma. Collectors and adjuvant equipment available on the market must be presented in the minutest detail to ostomized patients. The equipment used in some services is recommended as a result of the evaluation made at the time; but, over time, the equipment may be replaced – hence the need for a continuous assessment.<sup>1,29</sup>

Regarding intestinal prolapse, its occurrence is shown in isolation in one case, with added complications in two cases. The ostomized patient who presented as sole complication the prolapse (a female) had her surgery on an emergency basis, and presented this complication early. In this patient, the factors of age and stoma insertion site did not contribute to the problem, given that she was not an elderly person and the location of the stoma was adequate. Thus, there is a possibility of surgical technique failure during the stoma construction, as in many cases the incidence of prolapse is associated with technical details used.<sup>8,14,17,23,24,27,28,30</sup>

On the other hand, the simultaneous presence of prolapse and dermatitis has to do with the occurrence of the first complication due to the second one, that is, depending on the degree of externalization of the intestinal loop, the segment may be exposing the skin to patient's effluents and to an excessive mucosal secretion, thus reducing the poor adherence of the bag and favoring fecal leakage.<sup>23,24,27,28,30</sup>

As for the case with stoma retraction, during the interview and physical examination it was realized that this patient was an elderly, obese woman, and her stoma was poorly located. Therefore, these three factors determined the occurrence of an immediate retraction, which is characterized by discomfort and difficulty of adaptation to the equipment – in short, compromising self-care and the rehabilitative process.<sup>8,14,17,23,28–30</sup>

Although in most cases the making of an ostomy aims to save lives, the procedure involves numerous and varied adaptations that impose additional problems for the ostomized patient. These difficulties relate to the acceptance of changes in body image, lifestyle, social relationships and sexuality performance, all of which can generate social and psychological disorders, often difficult to overcome.<sup>10</sup>

Therefore, in view of the many aspects that involve the rehabilitation of the ostomized individual, the nursing care for this kind of client should have its start at the very moment of diagnosis and indication of surgery. Thus, the main

objective is to minimize suffering and get a better adaptation. The emphasis on self-care has been described as an alternative to enable the patient to actively participate in his/her own care, stimulating the responsibility for the continuity of care.<sup>10</sup>

This study shows the importance of using a clear, accessible and objective language by all professionals (nurses, doctors, psychologists) involved in the care of ostomy patients, for a better understanding by the client, considering that a good nursing care should begin in the preoperative period, with evaluations, guidance and care in the needed preparation to face the surgery. And this preparation should be continuous throughout the period during which the patient remains with the ostomy – and perhaps this means permanently. The ostomized patient should be well guided, taught and trained for the skills needed to take care of himself/herself, especially when it comes to handling the stoma, such as cleaning the peristomal skin, specifications and availability of specific equipment and adjuvant means for effluent collection.<sup>31</sup>

## Conclusion

With this study, we became aware of the profile of ostomized patients treated in Pouso Alegre/MG; with these data it is expected that the improvement of care to this population can be subsidized. We suggest that nursing professionals think about health strategies with respect to guidance on stoma manufacture and measures aiming for the prevention of possible complications, promoting ways to help these patients to make decisions and to verbalize their feelings, so that they feel supported in coping with changes in their body image, for the sake of survival.

## Conflicts of interest

The authors declare no conflicts of interest.

## REFERENCES

1. Fernandes RM, Miguir ELB, Donoso TV. Perfil da clientela estomizada residente no município de ponte nova, minas gerais. *Bras Coloproct.* 2011;30(4):385–92.
2. Santos CHM, Bezerra MM, Bezerra FMM, Paraguassu BR. Perfil do Paciente Ostomizado e Complicações Relacionadas ao Estoma. *Bras Coloproct.* 2007;27(1):016–9.
3. Santos VLCC, Cessaretti IUR. *Assistência em Estomaterapia: cuidando do ostomizado.* São Paulo: Atheneu; 2000.
4. Taylor C, Lillis C, Le Mone P. *Fundamentos de Enfermagem: a arte e a ciência do cuidado de enfermagem.* 5th ed. Porto Alegre: Artmed; 2007. p. 589–635.
5. Gemelli LMG, Zago MMF. A interpretação do cuidado com o ostomizado na visão do enfermeiro: um estudo de caso. *Latino-am Enfermagem.* 2002;10(1):34–40.
6. Costa VF, Alves SG, Eufrásio C, Salomé GM, Ferreira LM. Body image and subjective well-being in ostomists in Brazil. *Gastrointest Nurs.* 2014;12(5):37–47.
7. Salomé GM, Almeida SA. Association of sociodemographic and clinical factors with the self-image and self-esteem of individuals with intestinal stoma. *J Coloproctol.* 2014;34(3):159–66.
8. Aguiar ESS, Santos AAR, Soares MJGO, Silva Ancelmo MN, Santos SR. *Complicaciones del Estoma y de la Piel*

- Periestomal com Pacientes com Estomas Intestinais. *Rev Estima*. 2011;9(2):22-30.
9. Moraes JT, Victor DR, Abdo JR, Santos MC, Perdigão MM. Characterization of enterostomal people assisted by the Municipal General Office of Health of Divinópolis-MG. *Rev Estima*. 2009;7(3):31-7.
  10. Tosato SR, Zimmermann MH. Conhecimento do indivíduo ostomizado em relação ao autocuidado. *Conexão UEPG*. 2006;1(1):33-7.
  11. Cesaretti IUR, Santods VLCG, Vianna LAC. Qualidade de vida de pessoas colostomizadas com e sem uso de métodos de controle intestinal. *Rev Bras Enferm*. 2010;63(1):16-21.
  12. Zimnicki KM. Preoperative stoma site marking in the general surgery population. *J Wound Ostomy Cont Nurs*. 2013;40(5):501-5.
  13. Nakagawa H. Stoma location requires special consideration in selected patients. *J Wound Ostomy Cont Nurs*. 2013;40(6):565-6.
  14. Nakagawa H, Misao H. Effect of stoma location on the incidence of surgical site infections in colorectal surgery patients. *J Wound Ostomy Cont Nurs*. 2013;40(3):287-96.
  15. Salles VJA, Becker CPP, Faria GMR. The influence of time on the quality of life of patients with intestinal stoma. *J Coloproctol*. 2014;34(2):73-5.
  16. Melotti LF, Bueno IM, Silveira GV, Silva MEN, Fedosse E. Characterization of patients with ostomy treated at a public municipal and regional reference center. *J Coloproctol*. 2013;33(2):70-4.
  17. Macedo MS, Nogueira LT, Luz MHBA. Perfil dos estomizados atendidos em hospital de referência em Teresina. *Estima*. 2005;3(4):25-8.
  18. Pereira AP, Cesarino CB, Martins MR, Pinto MH, Netinho JG. Associations among socio-demographic and clinical factors and the quality of life of ostomized patients. *Rev Lat Am Enfermagem*. 2012;20(1):93-100.
  19. Paula MAB, Takahashi RF, Paula PR. Os significados da sexualidade para a pessoa com estoma intestinal definitivo. *Bras Colo-proctol*. 2009;29(1):77-82.
  20. Bechara RN, Bechara MS, Bechara CS, Queiroz HC, Oliveira RB, Mota RS, et al. Multidisciplinary staff of the stomized. *Bras Colo-proctol*. 2005;25(2):146-9.
  21. Wong SK, Young PY, Widder S, Khadaroo RG. A descriptive survey study on the effect of age on quality of life following stoma surgery. *Ostomy Wound Manage*. 2013;59(12):16-23.
  22. Knowles SR, Wilson J, Wilkinson AM. Psychological well-being and quality of life in Crohn's disease patients with an ostomy: a preliminary investigation. *J Wound Ostomy Cont Nurs*. 2013;40(6):623-9.
  23. Silva AC, Silva GNS, Cunha RR. Caracterização de Pessoas Estomizadas atendidas em Consulta de Enfermagem do Serviço de Estomaterapia do Município de Belém-PA. *Estima*. 2012;10(1):12-9.
  24. Zilberstein B, Gama-Rodrigues J, Habr-Gama A, Saad WA, Machado MCC, Ceconello I, et al. Cuidados pré e pós-operatórios em cirurgia digestiva e coloproctológica. São Paulo: Roca; 2001. p. 104.
  25. Ministério da Saúde (Brasil), Secretaria de Atenção à Saúde. Portaria n° 400, de 16 de novembro de 2009. Brasília (DF): Ministério da Saúde; 2009.
  26. Oliveira CAGS, Rodrigues JC, Silva KN. Identificação do nível de conhecimento de pacientes com colostomias para a prevenção de possíveis complicações. *Estima*. 2007;5(4):26-30.
  27. Chilida MSP, Santos AH, Calvo AMB, Bello BEC, Alves DA, Guerino MI. Complicações mais frequentes em pacientes atendidos em um polo de atendimento ao paciente com estoma no interior do Estado de São Paulo. *Estima*. 2007;5(4):31-6.
  28. Sonobe HM, Barichello E, Zago MMF. A visão do colostomizado sobre o uso da bolsa de colostomia. *Bras Cancerol Rev Bras Cancerol*. 2002;48(3):341-8.
  29. Salomé GM, Almeida SA, Silveira MM. Quality of life and self-esteem of patients with intestinal stoma. *J Coloproctol*. 2014;34:231-9.
  30. Habr-Gama A, Araújo SEA. Estomas Intestinais: aspectos conceituais e técnicos. In: Santos VLCG, Cesaretti IUR, editors. *Assistência em Estomaterapia: cuidando do ostomizado*. São Paulo: Atheneu; 2000. p. 39-40.
  31. Luz MHBA, Andrade DS, Amaral HO, Bezerra SMG, Benício CDAV, Leal ACA. Caracterização dos pacientes submetidos a estomas intestinais em um hospital público de Teresina-PI. *Texto Contexto Enferm*. 2009;18(1):140-6.