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# CARE AND HEALTH OF OSTOMY PATIENTS

## *Cuidado e saúde em pacientes estomizados*

## *Cuidado y salud de pacientes estomizados*

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**ABSTRACT**

**Objective:** To describe the epidemiological aspects, complications and hospitalizations related to ostomies. **Methods:** Quantitative descriptive cross-sectional study of the variables sex, age, age group, race/skin color, ostomy duration, ostomy type, etiology, complications and hospitalizations associated with colostomy in 123 patients seen at the nursing outpatient center for ostomy patients of a teaching hospital in Goiânia, Goiás, Brazil. After arranging the data in tables, the Epi Info 7 was used to describe the results, the prevalence analysis and the association of variables. **Results:** 51.2% (n=63) of the patients were men and there was a predominance of terminal colostomies (n=68; 57.6%), while 24.5% (n=29) were loop colostomies and 17% (n=20) were double-barrel colostomy. Regarding the etiology of the ostomy, 40.5% (n=49) were due to neoplasms, 17.3% (n=21) were due to inflammatory bowel disease and 9% (n=11) were due to trauma. The development of complications was present in 38 patients (30.89%), with peristomal dermatitis being the main complication, and 9 (7%) patients required hospitalization associated with ostomy. **Conclusion:** There was a predominance of men, mean age 61.5 years, pardos, terminal colostomy and neoplastic etiology, with most patients having a colostomy for about 5 years.

**Descriptors:** Ostomy; Colostomy; Health Profile; Therapeutic Uses; Postoperative Complications.

***RESUMO***

***Objetivo:*** *Descrever os aspectos epidemiológicos, as complicações e as hospitalizações relacionadas à estomia.* ***Métodos:*** *Trata-se de um estudo transversal, descritivo e quantitativo das variáveis: sexo, idade, faixa etária, raça/cor, tempo de estomia, tipo de estomia, etiologia, complicações e internações hospitalares associadas à colostomia de 123 pacientes atendidos no ambulatório de enfermagem para pacientes estomizados de um hospital escola em Goiânia, Goiás, Brasil. Após a disposição dos dados em tabelas, utilizou-se o software Epi Info 7 para a descrição dos resultados, a análise de prevalências e a associação de variáveis.* ***Resultados:*** *51,2% (n=63) dos pacientes eram do sexo masculino e houve predominância do tipo de colostomia terminal (n=68;57,6%), enquanto 24,5% (n=29) era do tipo em alça e 17% (n=20) do tipo dupla boca. Quanto à etiologia da estomia, 40,5% (n=49) ocorreu por neoplasia, 17,3% (n=21) por doença inflamatória intestinal e 9% (n=11) por trauma. O desenvolvimento de complicações esteve presente em 38 (30,89%) pacientes, sendo a dermatite periestomal a principal delas, e 9 (7%) pacientes necessitaram de internação hospitalar relacionada à estomia.* ***Conclusão:*** *Observa-se que os pacientes investigados apresentam predominância do sexo masculino, média de idade de 61,5 anos, raça/cor parda, de colostomia terminal e etiologia neoplásica, sendo a maioria dos pacientes portadores de colostomia há cerca de 5 anos.*

***Descritores:*** *Estomia; Colostomia; Perfil de Saúde; Usos Terapêuticos; Complicações Pós-Operatórias.*



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***RESUMEN***

***Objetivo:*** *Describir los aspectos epidemiológicos, las complicaciones y los ingresos hospitalarios relacionados con la estomía.* ***Métodos:*** *Se trata de un estudio transversal, descriptivo y cuantitativo de las variables sexo, edad, franja de edad, raza/color, tiempo de estomía, tipo de estomía, etiología, complicaciones e ingresos hospitalarios asociados con la colostomía de 123 pacientes asistidos en el ambulatorio de enfermería para pacientes estomizados de un hospital escuela de Goiânia, Goiás, Brasil. Después de la disposición de los datos en tablas, se utilizó el software Epi Info 7 para la descripción de los resultados, el análisis de prevalencias y la asociación de variables.* ***Resultados:*** *El 51,2% (n=63) de los pacientes eran del sexo masculino con predominio para el tipo de colostomía terminal (n=68; 57,6%) mientras el 24,5% (n=29) era del tipo de alza y el 17% (n=20) del tipo dupla boca. Respecto la etiología de la estomía, el 40,5% (n=49) se dio por neoplasia, el 17,3% (n=21) por enfermedad inflamatoria intestinal y el 9% (n=11) por trauma. El desarrollo de las complicaciones se dio en 38 (30,89%) pacientes y la dermatitis periestomal ha sido la principal de ellas; 9 (7%) pacientes necesitaron ingreso hospitalario relacionado con la estomía.* ***Conclusión:*** *Se observa que los pacientes investigados son en su mayoría del sexo masculino con media de edad de 61,5 años, de la raza/el color pardo, de colostomía terminal, etiología neoplásica de la estomía y en su mayoría pacientes portadores de colostomía hace cerca de 5 años.*

***Descriptores:*** *Estomía; Colostomía; Perfil de Salud; Usos Terapéuticos; Complicaciones Posoperatorias.*

## INTRODUCTION

The term ostomy derives from the Greek word stoma, which refers to the opening of a new mouth constructed surgically with the purpose of externalizing the hollow viscera of the human body. Regarding epidemiology, data from 2009 indicate that 1.4 million surgical procedures that result in ostomies are performed annually in Brazil[1]. Its prevalence is related to the gastrointestinal and genitourinary tracts and it primarily exerts the functions of deviation or decompression[2].

Regarding procedures in the colon, the deviation is used mainly in traumas and elective distal rectal surgeries with the aim of protecting bowel anastomoses from fecal contamination and subsequent complications. Colonic decompression is used to restore fecal flow in obstructive tumors and sigmoid volvulus[3].

With regard to ostomies, colostomy stands out as it can be performed in elective or emergency surgeries. It is classified as temporary or permanent, depending on the cause and purpose for which the device was surgically constructed[1,3,4,5]. The main current indications for its use are protection of ileosigmoid anastomosis, sigmoid volvulus, colorectal cancer, diverticulitis, inflammatory bowel diseases and trauma[4,6-8].

The main surgical types of colostomy are: Hartmann's (end) colostomy, double-barrel colostomy, and Paul-Mikulicz's colostomy. The indication, the experience of the surgeon, the general condition of the patient and the location of the bowel in which the colostomy will be performed are determining factors in the choice of type[9]. The therapeutic support of ostomies, particularly colostomies, in colorretal disorders are quite consistente; however, this procedure can entail multiple complications. These complications have high morbidity and mortality rates, which contribute to the decrease in the quality of life of patients with ostomies[6,10].

Complications, which can be classified as recent or late, lead to longer hospitalization and higher readmission rates, thus resulting in high hospital costs[11]. Recent complications include, but are not limited to, inappropriate site, skin excoriation, stoma retraction or necrosis, dehydration, and escape of colonic contents that cause injury to the skin. Late complications are mainly parastomal hernias, stoma prolapse, stenosis, fistula, dermatitis or peristomal abscess[12,13]. There may also be complications at the systemic level, mainly related to hydroelectrolytic disorders in high output stomas, anemia, pneumonia and sepsis[12,13].

Health care of patients with ostomies is governed and guaranteed by Ordinance No. 400, of November 16, 2009[14], which ensures the need for care of colostomized patients in primary health care centers and specialized services which should foster self-care, health promotion, complication prevention, supply of collectors and adjuvant equipment, and training of health professionals[14].

The care and follow-up of these patients should be performed by technically specialized and qualified professionals with the aim of reducing the number of complications and providing the patient with multiprofessional and humanized care, which is proven to assist in rehabilitation and promote self-care[1,15,16]. Guidelines on care and prevention of stoma-related complications should be complemented by specialized emotional support, which can be provided in individual or group counseling sessions in an attempt to minimize psychological and social impact[17].

The creation of the stoma is still a phenomenon that generates multiple psychosocial effects that directly influence the patient's quality of life in the postoperative period. Understanding the loss of voluntary control of physiological eliminations and daily living with a bag attached to the abdomen can lead to loss of self-esteem, depressive symptoms, social isolation, body image deviation, collapse of marital relationships, and deprivation of human freedom[18,19].

The way adaptation to the new condition occurs is a determining factor for the degree of satisfaction and well-being of the patient, as well as for their reintegration into their daily activities. Health care, therefore, must take the patient into account

in a holistic way, encompassing not only the patient, but also the Family and all their expectations, anxieties and needs. The relationship between health professionals and patients and the actions aimed at humanized care become important cofactors for quality care in the search for the user's well-being[19].

Given that, the present study aimed to describe the epidemiological aspects, complications and hospitalizations related to ostomies.

## METHODS

This is a quantitative descriptive cross-sectional study of data extracted from medical records of ostomy patients treated in an outpatient nursing clinic for ostomy patients of the Santa Casa de Misericórdia Hospital in Goiânia (Goiás), which provides health care to ostomy patients from the capital and countryside of the state. It is a private non-profit reference hospital in the Midwest region that offers multiple health care services.

The data analyzed in the study were obtained from the medical records and from a researcher-developed instrument. The following variables were analyzed: sex, age, age group, race/color, ostomy duration, type of ostomy, etiology that led to ostomy construction, types of complications according to the surgical period, number of hospitalizations associated with the ostomy and causes of hospital admissions. The management and analysis of the sample of 200 medical records occurred in the Medical and Statistical Archiving Service (*Serviço de Arquivo Médico e Estatística - SAME*) of the teaching hospital.

All the records of patients who attended the Ostomy Outpatient Clinic of the Santa Casa de Misericórdia Hospital in Goiânia in the period from August 2016 to August 2017 were included. Incomplete and missing medical records were excluded from the study. These criteria were used for 77 (38.5%) of the 200 medical records: 24 (12%) were missing and 53 (26.5%) were incomplete. Thus, a total of 123 records were analyzed in this study.

After identification and selection of the medical records of patients enrolled in the outpatient clinic, the data were organized in tables using 2013 Microsoft® Excel. Finally, Epi Info 7 was used for the description of the results, analysis of prevalences, and association of variables such as etiology and age group, sex and age group, and complications and ostomy duration.

All the ethical and legal precepts of this study are in accordance with Resolution No. 466/2012 of the National Health Council. Data collection took place after approval by the Ethics Committee of the Pontifical Catholic University of Goiás (*Pontifícia Universidade Católica de Goiás*) and the Santa Casa de Misericórdia of Goiânia (Approval No. 2.103.847).

## RESULTS

The sociodemographic data of 123 patients were analyzed in the present study. With regard to sex, 60 (48.8%) participants were women and 63 (51.2%) were men. Regarding the distribution of age groups, which is shown in detail in Table I, the mean age was 61.5 years, with a minimum age of 32 days of life and a maximum of 92 years. As for race/color, 95 (77.2%) participants were self-reported *pardos* (mixed-race Brazilians), 27 (22%) were White, and 1 (0.8%) was Black.

Table I - Frequency and percentage of patients treated at the Ostomy Outpatient Clinic of the Santa Casa de Misericórdia in Goiânia according to sex, age group and race/color. Goiânia, Goiás, Brazil, 2017.

| Variables | n | % |
|---|---|---|
| **Sex** | | |
| Women | 60 | 48.8 |
| Men | 63 | 51.2 |
| **Age** | | |
| 0-10 | 3 | 2.4 |
| 10-20 | 2 | 1.6 |
| 20-30 | 5 | 4 |
| 30-40 | 8 | 7 |
| 40-50 | 13 | 11 |
| 50-60 | 20 | 16 |
| 60-70 | 26 | 21 |
| 70-80 | 31 | 25 |
| 80-90 | 14 | 11 |
| >90 | 1 | 1 |
| **Race/Color** | | |
| Pardo | 95 | 77 |
| White | 27 | 22 |
| Black | 1 | 1 |

Ostomies are shown in Table II. In all, 117 were colostomies and 1 was a ileostomy. Of all colostomies, 68 (57.6%) were end colostomies, 29 (24.5%) were loop colostomies, and 20 (17%) were double-barrel colostomies. A total of 5 records did not contain information about the type of ostomy.

Table II - Frequency of patients treated at the Ostomy Outpatient Clinic of the Santa Casa de Misericórdia Hospital in Goiânia according to ostomy type and duration. Goiânia, Goiás, Brazil, 2017.

| Variables | n | % |
|---|---|---|
| Type of ostomy | | |
| End colostomy | 68 | 57.6% |
| Loop colostomy | 29 | 24.5% |
| Double-barrel colostomy | 20 | 17% |
| Ileostomy | 1 | 0.9% |
| **Duration of ostomy** | | |
| 0-5 years | 68 | 55.3% |
| 5-10 years | 31 | 25.2% |
| 10-15 years | 9 | 7.3% |
| 15-20 years | 10 | 8.1% |
| >20 years | 5 | 4.1% |

Table III shows the etiologies that led to ostomy construction. The main cause of ostomy was cancer, with 49 (40.5%) cases. In a smaller number, 21 (17.3%) cases, ostomy was caused by inflammatory bowel diseases (IBD). In 11 (9%) cases, ostomy was caused by trauma.

The category referring to other causes encompasses several etiologies that presented lower proportions in the present study, such as stroke, abscess/fasciitis, transverse colon adhesion, surgical complication, gastrointestinal tract infections, bowel obstruction, familial adenomatous polyposis (FAP) and congenital malformations.

For women, cancer (40%) represented the main cause followed by IBD (20%). For men, cancer was the main cause (41%) followed by trauma (16.4%). These data are described in Table III. During data collection, we observed complete information on etiology in 121 medical records and missing information on etiology in 2 medical records.

Table III - Frequency and percentage of patients treated at the Ostomy Outpatient Clinic of the Santa Casa de Misericórdia Hospital in Goiânia according to etiology and sex. Goiânia, Goiás, Brazil, 2017.

| Etiology | n | % | Women | % | Men | % |
|---|---|---|---|---|---|---|
| **Cancer** | 49 | 40.5% | 24 | 40% | 25 | 41% |
| **Inflammatory bowel disease** | 21 | 17.3% | 12 | 20% | 9 | 14.7% |
| **Other** | 12 | 9.9% | 4 | 6.7% | 8 | 13.1% |
| **Trauma** | 11 | 9% | 1 | 1.7% | 10 | 16.4% |
| **Chagasic Megacolon** | 10 | 8.2% | 7 | 11.7% | 3 | 5% |
| **Sigmoid volvulus** | 7 | 5.8% | 4 | 6.7% | 3 | 5% |
| **Diverticular disease** | 4 | 3.4% | 4 | 6.6% | 0 | 0% |
| **Fistula** | 3 | 2.5% | 2 | 3.3% | 1 | 1.6% |
| **Congenital Megacolon** | 2 | 1.7% | 2 | 3.3% | 0 | 0% |
| **Fournier's Syndrome** | 2 | 1.7% | 0 | 0% | 2 | 3.2% |
| **Total** | 121 | 100% | 60 | | 61 | |

The analysis of the correlation between sex and age group, as shown in Figure 1, revealed a predominance of women aged 70-80 years, 80-90 years and older than 90 years compared with men. On the other hand, men predominated in all age groups younger than 70 years compared with women.

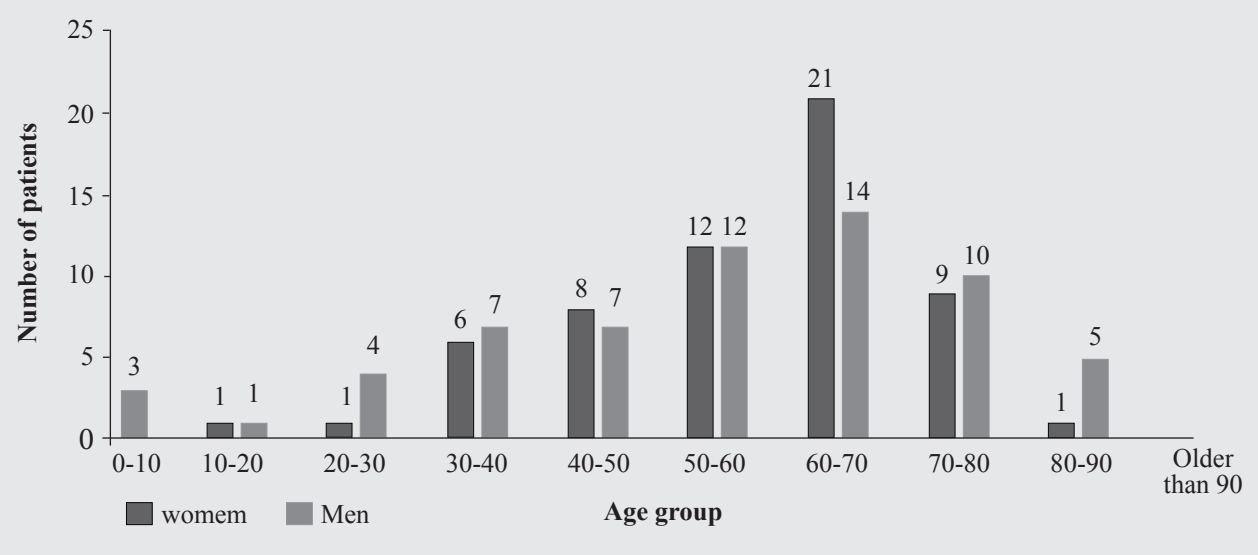


Figure 1 - Distribution of patients treated at Ostomy Outpatient Clinic of the Santa Casa de Misericórdia Hospital in Goiânia according to age group and sex. Goiânia, Goiás, Brazil, 2017.

According to Table IV, which describes the duration of ostomy, 68 (55%) patients had ostomy between 0-5 years and 31 (25%) patients had ostomy between 5-10 years. A total of 38 patients, as shown in Table IV, presented complications, including peristomal dermatitis (26.3%), parastomal hernia (15.8%) and stenosis (13.2%). The analysis of the association between types of complication and ostomy duration showed that in the 0-5 year period, 18 (47.4%) complications occurred, the most prevalent being peristomal dermatitis. Between 5 and 10 years, 12 (31.6%) complications occurred, predominantly dermatitis and parastomal hernia. In the period of 10-15 years, 5 (13%) different complications were recorded. In the period of 15-20 years, 3 (7.9%) complications occurred, with a predominance of stoma prolapse, as presented in Table IV.

Of the patients analyzed, 9 (7%) required ostomy-related hospitalization. All the cases resulted in new surgical procedures.

Table IV - Frequency of patients treated at the Ostomy Outpatient Clinic of the Santa Casa de Misericórdia Hospital in Goiânia according to type of complication and ostomy duration. Goiânia, Goiás, Brazil, 2017.

| Complication | Ostomy duration | | | | Total (%) |
|---|---|---|---|---|---|
| | 0-5 years | 5-10 years | 10-15 years | 15-20 years | |
| **Peristomal demartitis** | 6 (15.8%) | 3 (7.9%) | 1 (2.6%) | 0 | 10 (26.3%) |
| **Parastomal hernia** | 2 (5.3%) | 3 (7.9%) | 1 (2.6%) | 0 | 6 (15.8%) |
| **Stenosis** | 2 (5.3%) | 2 (5.3%) | 1 (2.6%) | 0 | 5 (13.2%) |
| **Other** | 3 (7.9%) | 1 (2.6%) | 1 (2.6%) | 0 | 5 (13.2%) |
| **Stoma prolapse** | 1 (2.6%) | 1 (2.6%) | 0 | 2 (5.3%) | 4 (10.5%) |
| **Fistula** | 1 (2.6%) | 0 | 1 (2.6%) | 1 (2.6%) | 3 (7.9%) |
| **Abscess** | 2 (5.3%) | 0 | 0 | 0 | 2 (5.2%) |
| **Hemorrhage** | 0 | 2 (5.3%) | 0 | 0 | 2 (5.2%) |
| **Infection** | 1 (2.6%) | 0 | 0 | 0 | 1 (2.7%) |
| **Total** | 18 (47.4%) | 12 (31.6%) | 5(13%) | 3(7.9%) | 38 (100%) |

## DISCUSSION

In the present study, the mean age of the patients treated at the Ostomy Outpatient Clinic of the Santa Casa de Misericórdia Hospital in Goiânia (Goiás) is 61.5 years, with a predominance of individuals aged older than 60 years. This finding is consistent with other studies[1,16,18,20,21]. This is mainly due to older adults' increased vulnerability to noncommunicable diseases (NCDs), such as cancer. In addition, the treatment of cancer is predominantly surgical and leads to the construction of ostomies[1,16].

The analysis of the race/color occurred in studies[17,22] that presented the White race/color as the most prevalente. In contrast, the present study revealed a predominance of *pardos* in the study population. This study is also consistent with other studies with

regard to sex and etiology of ostomy, with a predominance of men (51.2%) and ostomy due to cancer in both sexes[1,4,5,17,18,20,21-23]. Disagreeing with the present study, other studies presented a predominance of acute causes, such as gangrenous sigmoid volvulus[4,6].

According to estimates from the National Cancer Institute (*Instituto Nacional de Câncer – INCA*), colorectal cancer is the third most common cancer in men. It is even more common in women, ranking second[24]. When analyzed separately, the main causes of ostomy in women were cancer and inflammatory bowel diseases (IBD). As for men, the main causes were cancer and trauma. An analysis performed in an ostomy service in Porto Alegre (Rio Grande do Sul) is consistent with the predominance of cancer of the main cause of ostomy in both sexes[25]. Another study also found trauma as the second most common cause in men[18].

There is evidence that the recovery of ostomy patients is influenced by their sex. Although depression and fear in the preoperative period are more frequent in women, they usually recover more quickly. In addition, sexual impotence has been highlighted as one of the main factors for the delay in reintegration into daily activities and the development of self-care in men[17,18].

In the present study, the data regarding the distribution of patients according to age group and gender showed a predominance of women aged over 70 years and men aged below 70 years. Another study also found a higher prevalence of men in the younger age groups and women over the age of 40 years[18].

A possible explanation for this finding is related to the strong association between the traumatic causes and the male sex. Traumas are associated with events of external causes to which men, especially the younger, have greater exposure[18,24,25]. A study carried out in 2016 shows that this pattern is also observed in the adolescent population, in which all colostomies performed on individuals aged 15 to 20 years occurred due to trauma, with 86.3% of the cases occurring among men[26]. Such information demonstrates the social situation of greater vulnerability and risk of death due to external causes to which men, especially young men, are currently exposed in our country[18].

As for the type of ostomy, there was a predominance of end colostomies (58%). This is related to the main etiology found, since the most common and widely accepted surgical treatment for colorectal cancer is the Hartmann's procedure, which includes end colostomy[27]. In similar studies, colostomies were also more prevalent than other stomies[1,18,20,22].

Most of the patients (55%) in the present study had a colostomy for 0 to 5 years. In similar studies, patients lived with an ostomy for about 2 years[15,17,21]. The first years after the creation of ostomy are considered a period of adaptation, a process that has a peculiar duration for each patient. Therefore, it is important to count on a multidisciplinary team with competence to carry out an individual approach to the patient and the family with the aim of improving quality of life, promoting self-care and reducing complications in this group of patients[15,17].

There were complications in 30.89% of the patients analyzed in the present research. The main complications were peristomal dermatitis (26.3%), followed by parastomal hernia (15.8%) and stenosis (13.2%). The literature analyzed presents rates of complications ranging from 36-66%, with peristomal dermatitis, parastomal hernia and surgical site infections being the main complications. Studies reporting a higher prevalence of emergency surgeries for the creation of ostomy present local and systemic infections as the main complications. In addition, patients with previous chronic morbidities, such as diabetes mellitus, tend to have a higher rate of complications[1,4,17,20-22].

A total of 7% of the patients analyzed in our study required hospitalization related to the ostomy after its creation, and all cases needed a new surgical procedure. A study carried out in 2017 found a rate of hospital readmissions of 28% and emphasized that hospitalizations of patients over 65 years old are more predictable and occur due to avoidable causes[23].

The analyzed literature reveals a similarity of the epidemiological profile of the study patients and that of patients from other Brazilian regions, such as the Northeast and Midwest. However, it differs from that reported by international studies conducted in European and African regions, mainly regarding etiologies and complications[1,4,6,18,20].

Studies have shown that the creation of an ostomy promotes a huge change in the lives of patients. In addition to biological changes, there is a new care routine, changes in eating and hygiene behaviors, and changes in self-esteem and in social relations. There are also negative changes in self-image, loss of interest in activities outside the home and exercises, and a decrease in sexual activity, which result in an impairment of the quality of life of these patients[28,29].

The way adaptation to the new condition occurs is a determining factor for the degree of satisfaction and well-being of the patient, as well as for their reintegration into their daily activities. Health care, therefore, must take the patient into account in a holistic way, encompassing not only the patient, but also the family and all their expectations, anxieties and needs[2,19,26]. The creation of and participation in ostomy support groups has shown to be very important in the process of adaptation and for sharing doubts and experiences in the group of patients and families[30].

The literature shows that ostomy patients believe that they are responsible for their health and that the multiprofessional team or other people cannot interfere in their health, improvement or cure[30]. In this context, it is extremely important to build a relationship between health professionals and patients and to address care and interpersonal relationships among all the team members. It is also important to develop actions aimed at humanized care to foster self-care and reduce complications and morbidy and mortality associated with ostomies so as to improve the user's well-being[2,19,26].

The limitations of this study were the incomplete and missing medical records, which hindered data collection using the data collection instrument developed by the researchers, and the inclusion of 77 medical records in the study.

However, the present study may contribute to the improvement of comprehensive and humanized health care for ostomy patients and for the community that will receive this service. It also fosters the development of further research that may contribute to the ostomy clinic of the Santa Casa de Misericórdia Hospital of Goiânia (Goiás) and other services aimed at meeting the needs of this population.

## CONCLUSION

Among the patients analyzed there was a predominance of men, mean age of 61.5 years, *pardos*, end colostomy, ostomy due to cancer, and colostomy duration of about 5 years.

## CONFLICTS OF INTEREST

The present study has no conflicts of interest.

## REFERENCES

1. Lenza NFB. Programa de ostomizados: os significados para estomizados intestinais e família. [dissertation]. Ribeirão Preto: Universidade de São Paulo; 2011 [accessed on 2018 Mar 6]. Available from: http://www.teses.usp.br/teses/disponiveis/22/22132/tde-31102011-092509/pt-br.php
2. Silva AC, Silva GNS, Cunha RR. Caracterização de pessoas estomizadas atendidas em consulta de enfermagem do serviço de estomaterapia do município de Belém-PA. Rev Estima [Internet]. 2012 [accessed on 2016 Sep 25];10(1):20-7. Available from: https://www.revistaestima.com.br/index.php/estima/article/view/72.
3. Wahl W, Hassdenteufel A, Hofer B, Junginger T. Temporary colostomies after sigmoid colon and rectum interventions: are they still justified? Langenbecks Arch Chir [Internet]. 1997 [accessed on 2016 Sep 25];382(3):149-56. Available from: https://www.ncbi.nlm.nih.gov/pubmed/9324614
4. Engida A, Ayelign T, Mahteme B, Aida T, Abreham B. Types and indications of colostomy and determinants of outcomes of patients after surgery. Ethiop J Health Sci [Internet]. 2016 [accessed on 2016 Sep 25];26(2):117-20. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4864340/
5. Zafar SN, Changoor NR, Williams K, Acosta RD, Greene WR, Fullum TM, et al. Race and socioeconomic disparities in national stoma reversal rates. Am J Surg [Internet]. 2016 [accessed on 2016 Sep 25];211(4):710-5. Available from: https://www.ncbi.nlm.nih.gov/pubmed/26852146
6. Bekele A, Kotisso B, Tesfaye M. Patterns and indication of colostomies in Addis Ababa, Ethiopia. Ethiop Med J [Internet]. 2009 [accessed on 2016 Sep 25]; 47(4):285-90. Available from: https://www.ncbi.nlm.nih.gov/pubmed/20067143
7. Zarnescu EC, Zarnescu NO, Costea R, Rahau L, Neagu S. Morbidity after reversal of Hartmann operation: retrospective analysis of 56 patients. J Med Life [Internet]. 2015 [accessed on 2016 Oct 15];8(4):488-91. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4656958/
8. Oliveira RAN, Oliveira PG, Santos ACN, Sousa JB. Morbidade e mortalidade associadas ao fechamento de colostomias e ileostomias em alça acessadas pelo estoma intestinal. Rev Col Bras Cir [Internet]. 2012 [accessed on 2016 Oct 15]; 39(5):389-93. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0100-69912012000500009
9. Silva MMDCV. Irrigação uma opção de vida do colostomizado!? [dissertation]. Porto: Instituto de Ciências Biomédicas Abel Salazar; 2008 [accessed on 2016 Oct 15]. Available from: https://repositorio-aberto.up.pt/bitstream/10216/7191/2/Capa.pdf
10. Hendren S, Hammond K, Glasgow SC, Perry B, Buie WD, Steele SR, et al. Clinical practice guidelines for ostomy surgery. Dis Colon Rectum [Internet]. 2015 [accessed on 2016 Oct 26];58(4):375–87. Available from: https://www.ncbi.nlm.nih.gov/pubmed/25751793
11. Messaris E, Sehgal R, Deiling S, Koltun WA, Stewart D, McKenna K, et al. Dehydration is the most common indication for readmission after diverting ileostomy creation. Dis Colon Rectum [Internet]. 2012 [accessed on 2016 Oct 26]; 55(2):175-80. Available from: https://www.ncbi.nlm.nih.gov/pubmed/22228161
12. Shabbir J, Britton DC. Stoma complications: a literature overview. Colorectal Dis [Internet]. 2010 [accessed on 2016 Oct 26];12(10):958-64. Available from: https://www.ncbi.nlm.nih.gov/pubmed/19604288

13. Mealy K, O'Broin E, Donohue J, Tanner A, Keane FB. Reversible colostomy--what is the outcome? Dis Colon Rectum [Internet]. 1996 [accessed on 2016 Oct 26];39(11):1227-31. Available from: https://www.ncbi.nlm.nih.gov/pubmed/8918429

14. Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Portaria Nº 400, de 16 de novembro de 2009. Brasília: Ministério da Saúde; 2009 [accessed on 2017 Mar 4]. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/sas/2009/prt0400_16_11_2009.html

15. Fernandes RM, Miguir ELB, Donoso TV. Perfil da clientela estomizada residente no município de Ponte Nova, Minas Gerais. Rev Bras Colo-proctol [Internet]. 2011 [accessed on 2016 Nov 17];30(4):385-92. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0101-98802010000400001

16. Miranda SM, Luz MHB, Sonobe HM, Andrade EMLR, Moura ECC. Caracterização sociodemográfica e clínica de pessoas com estomia em Teresina. Rev Estima [Internet]. 2016 [accessed on 2017 Mar 4];14(1):29-35. Available from: https://www.revistaestima.com.br/index.php/estima/article/view/117/0

17. Spiers J, Smith JA, Simpson P, Nicholls AR. The treatment experiences of people living with ileostomies: an interpretative phenomenological analysis. J Adv Nurs [Internet]. 2016 [accessed on 2017 Mar 4];72(11):2662-71. Available from: https://www.ncbi.nlm.nih.gov/pubmed/27298133

18. Wu R, Boushey R, Potter B, Stacey D. The evaluation of a rectal cancer decision aid and the factors influencing its implementation in clinical practice. BMC Surg [Internet]. 2014 [accessed on 2017 Mar 4];14:16. Available from: https://www.ncbi.nlm.nih.gov/pubmed/24655353

19. Ferreira-Umpiérrez A, Fort-Fort Z. Experiences of family members of patients with colostomies and expectations about professional intervention. Rev Latinoam Enferm [Internet]. 2014 [accessed on 2016 Dec 12];22(2):241-7. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-11692014000200241

20. Carlsson E, Fingren J, Hallén AM, Petersén C, Lindholm E. The prevalence of ostomy-related complications 1 year after ostomy surgery: a prospective, descriptive, clinical study. ostomy wound manage [Internet]. 2016 [accessed on 2017 Feb 21];62(10):34-48. Available from: https://www.ncbi.nlm.nih.gov/pubmed/27768579

21. Kimura CA, Kamada I, Guilhema D, Monteiro PS. Quality of life analysis in ostomized colorectal cancer patients. J Coloproctol [Internet]. 2013 [accessed on 2016 Nov 17];33(4):216-21. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S2237-93632013000400216

22. Ribeiro MSM, Ferreira MCM, Coelho SA, Mendonça GS. Clinical and demographic characteristics of intestinal stoma patients assisted by orthotics and prosthesis grant program of the Clinical Hospital of the Federal University of Uberlandia, Brazil. J Biosci [Internet]. 2016 [accessed on 2017 Apr 19];32(4):1103-9. Available from: http://www.seer.ufu.br/index.php/biosciencejournal/article/view/32293

23. Fish DR, Mancuso CA, Garcia-Aguilar JE, Lee SW, Nash GM, Sonoda T, et al. Readmission after ileostomy creation: retrospective review of a common and significant event. Ann Surg [Internet]. 2017 [accessed on 2017 July 29];265(2):379-87. Available from: https://www.ncbi.nlm.nih.gov/pubmed/28059966

24. Ministério da Saúde (BR), Instituto Nacional de Câncer José Alencar Gomes. Estimativa 2016, Incidência de câncer no Brasil [Internet]. Rio de Janeiro: INCA; 2016 [accessed on 2017 Mar 4]. Available from: http://www.inca.gov.br/bvscontrolecancer/publicacoes/edicao/Estimativa_2016.pdf

25. Sier MF, van Gelder L, Ubbink DT, Bemelman WA, Oostenbroek RJ. Factors affecting timing of closure and non-reversal of temporary ileostomies. Int J Colorectal Dis [Internet]. 2015 [accessed on 2017 Mar 4];30(9):1185-92. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4553149/

26. Bonatto CR, Marques GQ. Análise do perfil dos usuários com estomia intestinal atendidos em serviço de estomizados de Porto Alegre [final paper]. Porto Alegre: Universidade do Vale do Rio do Sinos: Universidade do Vale do Rio do Sinos; 2013 [accessed on 2016 Nov 17]. Available from: http://www.repositorio.jesuita.org.br/handle/UNISINOS/5656

27. Reis LDO, Lombardi OA, Reis ADO, Cardoso EH, Cardoso CAM Filho. Cirurgia de Hartmann - Análise de 41 casos em Hospital de referência do norte do Paraná. Rev Bras Colo-proctol [Internet]. 2001 [accessed on 2016 Oct 29]; 21(1):19-22. Available from: https://www.sbcp.org.br/revista/nbr211/P19_22.htm

28. Salomé GM, Lima JA, Muniz KC, Faria EC, Ferreira LM. Health locus of control, body image and self-esteem in individuals with intestinal stoma. J Coloproctol (Rio J Online). 2017 [accessed on 2018 Feb 19];37(3):216-24. Available from: http://www.scielo.br/scielo.php?pid=S2237-93632017000300216&script=sci_arttext

29. Salomé GM, Almeida SA, Mendes B, Carvalho MRF, Massahud MR Júnior. Assessment of subjective well-being and quality of life in patients with intestinal stoma. J Coloproctol (Rio J Online). 2015 [accessed on 2018 Feb 19];35(3):168-74. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S2237-93632015000300168

30. Campos K, Bot LHB, Petroianu A, Rebelo PA, Souza AAC, Panhoca I. The impact of colostomy on the patient's life. J Coloproctol (Rio J Online). 2017 [accessed on 2018 Feb 19];37(3):205-10. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S2237-93632017000300205

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