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Digestive Stomies: Indications; Complications and Management in the Visceral Surgery Department of Donka National Hospital

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ABSTRACT

Introduction: *The aim of our study was to contribute to the improvement of care for stoma patients in the department.*

Material and Method: *This was a descriptive prospective study lasting 1 year from February 1, 2019, to January 31, 2020, involving 13 patients.*

Results: *Digestive stomas were performed in 4% of abdominal surgeries. The average age was 37 years plus or minus 19.7 years with a male predominance and a sex ratio of 1.6. Intestinal obstruction due to sigmoid colon volvulus (84.6) was the main indication for stomas. Colostomy was the most performed type of stoma at 92.3% and most often temporary at 84.6%. The Hartmann technique at 46.1% was the most used. The makeshift bag (plastic sachet) was the most used as a stoma bag for all patients. Seventy-two point seven percent presented with necrosis of the stoma mouth and all underwent necrosectomy in the operating room; peri-stomal irritation was observed in 15.4% and a mortality rate of 15.4%.*

In surgical procedures, intestinal continuity was achieved in 8 patients within an average period of 68.1 days.

Conclusion: *Digestive stomas are relatively common and have an impact on patients' psychology. A better approach to management could reverse this trend.*

Keywords

Digestive stoma, Indications, Complications, Management, Donka Hospital.

Introduction

Stomy, from the Greek stoma, is an intentional and surgical connection, whether temporary or permanent, of a hollow organ to the skin, allowing, in the case of digestive stomas, for the evacuation of fecal matter. Stomy is a complex surgical procedure that has been the subject of several studies around the world. The International Ostomy Association (OIA) estimates that over one million stomas are created worldwide. Depending on the site of the stoma, it will be referred to as gastrostomy, duodenostomy, jejunostomy, cecostomy, or colostomy. Data on the number of ostomized patients are scarce. In Quebec, 10,470 permanent ostomies were recorded in 2007 for a population of 7.75 million. A new international survey conducted by Coloplast in 2010 among stoma care nurses and ostomized individuals in France, the United Kingdom, Germany, and the United States showed that there were 1,686 ostomized individuals, men and women, of

whom 513 were French [6]. In the United States, approximately 150,000 stomas are created each year, almost evenly distributed between ileostomies and colostomies [6]. In Africa, due to a lack of data on the prevalence of stomas, we report here some hospital frequencies.

The creation of a digestive stoma, whether it is a side stoma or a terminal stoma, is a crucial moment in colorectal surgical intervention. It can be responsible for postoperative complications in 35% of patients. The situations leading to complications are known to surgeons, although there is no factual data in the literature to discriminate them. They are related to the patient (obesity, portal hypertension, HIV infection, diabetes, malnutrition); to the underlying pathology, the conditions of the intervention, and the surgeon's skill, which inevitably influence the prognosis [1].

Methodology

This was a prospective, descriptive study involving 13 patients collected in the department over a one-year period from February 1, 2019 to January 31, 2020. Patients who were admitted and operated on in the department for whom a digestive stoma was performed and who agreed to participate in the study were included. Those who did not consent to the study were excluded.

Results

In 1 year, we collected 13 cases of digestive stomas, accounting for 4% of abdominal surgical interventions. The age group 21-40 years was the most affected, with 53.85%. The average age of our patients was 37 years, with extremes of 14 and 70 years. We noted a male predominance of 61.5% with a sex ratio of 1.6. The majority of patients were received in emergencies n=10; 76.92% for occlusive syndrome was present in all patients. The volvulus of the pelvic colon constituted the main indication for the stoma n=11, 84.6%, followed by a rectal tumor and a lower esophageal tumor at 7.7%. Colostomy was the most performed type of stoma at 92.3%, followed by a case of gastrostomy. 84.6% of colostomies were temporary compared to 15.4% being permanent. The Hartmann technique was the most commonly used at 46.1%, followed by the Bouilly Volkmann technique at 38.5%. A makeshift pouch was used for all patients. Eight patients, or 72.7%, experienced necrosis of the stoma site; among these, two had peristomal skin irritation, which represents 15.4%. All stoma necroses were addressed in the operating room for necrosectomy; those that caused peristomal skin irritation underwent a change from plastic devices to more suitable regular devices. Operative outcomes were favorable in 11 cases or 84.6%, and we recorded two deaths n=2; 15.4%. Sixty-one point five percent (61.5%) of the patients with stomas had a 14-day hospital stay during their first hospitalization. Restoration of digestive continuity was performed in 8 patients or 61.5%, and the average recovery time was 68.1 days, with extremes of 13 days and 169 days.

Figure 1: Colostomy according to Bouilli Wolkmann placed on the occasion of an acute intestinal obstruction due to volvulus of the sigmoid colon with necrosis.

Figure 2: Ileostomy placed in the event of a generalized acute peritonitis due to ileal perforation of typhoid origin.

Discussion

Over 1 year, we recorded 4% of digestive stomas in relation to all surgical procedures. Traoré A et al. [2] in 2010 in Mali found 7.4% in six months. Coulibaly YM [11] reported 0.81% stomas at CHU Gabriel Touré in 2011 in Mali. This difference could be explained by the fact that they included stoma patients elsewhere. The high frequency of stoma complications and the psychosocial impact make this practice relatively rare in our hospitals. The stoma is considered a shame, not compatible according to some patients with prayer and community life. The age group of 21-40 years was the most affected with 53.85%. The average age of our patients was 37 years with extremes of 14 and 70 years. Toure FB et al. [3] in 2016 found an average age of 35 years with extremes of 16 and 91 years. In Europe, stomas are more often performed in elderly people for colorectal cancers and chronic inflammatory bowel diseases [4,5]. In Africa, the indicators are dominated by pelvic colon volvulus, ileal perforations, perineal gangrene, colonic wounds, and perineal injuries. With the aim of providing

quality care without prolonged hospital stays, protective stoma is created to ensure proper wound healing and patient conditioning. A male predominance was noted at 61.5% with a sex ratio of 1.6. Our result corroborates most African studies. Gueye in Dakar in 2015 reported 80% men and a male-to-female sex ratio of 6. Professionals in liberal occupations were the most represented at 46.15%. Coulibaly YM in Mali reported 74.39% farmers. This could be explained by delays in consultation due to financial difficulties and the reliance on traditional treatment. The evolution of the disease was 7 days and most patients were received in emergency. Our result is different from that of TEBALA GD et al. [12] who reported 3.8% of stomas performed in emergency in 2018. Allart K et al. [13] reported 27%. Self-medication, which often delays consultation in a specialized department, leads to a dramatic situation; patients arriving at the stage of complications. This situation does not allow for psychological support to prepare them for the stoma. The emergency action to improve prognosis is a priority. In an African context, self-medication is the first alternative. Emergencies give less time for psychological support for the stoma. Pelvic colon volvulus was the most frequent indication at 84.6%. Gueye D et al. [6] in Dakar in 2015 reported a frequency of 31.1%.

Meisner S et al. [7] reported in Denmark in 2012 an indication related to colorectal cancers of 24.2%; followed by ulcerative colitis at 12%. The European population is aging with a chemically-laden diet. All our patients were operated on under general anesthesia and colostomy was the most commonly used type of stoma at 92.3%. This predominance of colostomies was reported by Meisner S et al. in 2012, as well as by Traoré A et al. [2] who mentioned 65% and 65.6% of cases, respectively. The Hartmann technique was used in 46.1%; Bouilly Volkmann in 38.5%; colostomy on a rod 7.7%; and Witzel's technique in 7.7%. Severe prolonged ischemia leading to extensive necrosis did not allow the stump ends to be brought to the skin after resection of the necrotic part. Touré FB et al. [3] reported 40.9% for Bouilly Volkmann and 19.7% for Hartmann. All patients received medication treatments consisting of antibiotics, analgesics, and rehydration solutions. Coulibaly YM [11] in Mali in 2011 corroborates our approach. The decision for a stoma is often made in patients who arrive in poor general condition and require stabilization before undergoing surgery. In our societies, wearing a colostomy must be preceded by counseling as it is sometimes poorly perceived by religious people. The device made of plastic bags was used by 84.6% and the ordinary device by 15.4%. Traore A et al. [2] had used plastic water bags. This would explain the low purchasing power of populations that cannot afford the ordinary device. In our series, 72.7% presented with necrosis of the stoma tip and 15.4% with peristomal irritation. Traoré et al. [2] reported 3.1% peristomal necrosis and 21% stoma irritation. Postoperative outcomes were good in 84.6% and we recorded two cases of death.

Kibonge et al. [1] in the DRC in 2019 reported a simple evolution of 18.2% and two cases of death. The length of stay for the first hospitalization was less than 14 days for 61.5%, and the average recovery time was 68.1 days.

Conclusion

Digestive stoma is a complex surgical procedure; common in our hospital practices. It has various indications and requires sustained awareness and technical quality. It is more commonly performed in adults, with volvulus obstructions being the most frequent indications. Improving the technical platform and considering the psychological impa ct could further change the prognosis.

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