SAS Journal of Surgery
Abbreviated Key Title: SAS J Surg
ISSN 2454-5104
Journal homepage: https://www.saspublishers.com

OPEN ACCESS

Surgery

Management of Ulcerative Pyloric Stenosis in the General Surgery Department of the Ignace Deen National Hospital, CHU Conakry (Guinea)

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DOI: 10.36347/sasjs.2023.v09i11.002 | **Received:** 04.10.2023 | **Accepted:** 18.10.2023 | **Published:** 05.11.2023

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Abstract **Original Research Article**

Aim: was to contribute to the improvement of the management of ulcerative pyloric stenosis in the general surgery department of the Hôpital National Ignace Deen. CHU in Conakry. ***Patients and methods***: This was a retrospective descriptive study, covering a period of 10 years (January 2013 to December 2022), on the consecutive records of patients operated on for ulcerative pyloric stenosis in the general surgery department of the Hôpital National Ignace Deen, CHU de Conakry. ***Results***: Over a 10-year period, we recorded 81 cases of ulcerative pyloric stenosis, representing a hospital frequency of 2.03%. The mean age of patients was 48.96 ± 16.73 years, with extremes of 14 and 76 years. Males predominated (65.4%), with a sex ratio of 1.89. Housewives were the most represented (32.1%). The main reasons for consultation were vomiting (96.30%) and epigastralgia (95.06%). The surgical approach was median supra-umbilical laparotomy for 51 cases (62.96%) and median supra- and sub-umbilical laparotomy for 30 cases (37.04%). Gastrojejunal bypass was performed in 85.19% of cases, followed by pyloroplasty + vagotomy (8.64%) and pyloroplasty (6.17%). Postoperative outcome was favorable in 90.12% (n=73). We recorded 3 deaths (3.70%). Average hospital stay was 16.7± 5.2 days, with extremes of 6 and 29 days. ***Conclusion***: Ulcerative pyloric stenosis is a sign of long-standing ulcerative disease, and remains frequent in our context.

Keywords: ulcerative stenosis, pylorus, management, Ignace Deen.

INTRODUCTION

Ulcerative pyloric stenosis is a complication of ulcer disease, characterized by a permanent reduction in the caliber of the pyloric lumen, which impedes gastric emptying [1]. In developed countries, its occurrence is becoming rarer thanks to the effectiveness of medical treatment of ulcers [2]. On the other hand, it is still common in developing countries, accounting for 50-80% of all complications of ulcer disease [3].

At present, surgical treatment is effective. It is based on vagotomy combined with gastric emptying. There is as yet no consensus as to which surgical technique should be adopted, each having its advantages and disadvantages [1]. The aim of this study was to contribute to the improvement of the management of ulcerative pyloric stenosis in the general surgery department of the Hôpital National Ignace Deen, CHU Conakry.

PATIENTS AND METHODS

This was a retrospective descriptive study covering a period of 10 years (January 2013 to December 2022), carried out in the general surgery department of the Ignace Deen National Hospital, focusing on the consecutive records of patients operated on for pyloric stenosis. We included all patients whose diagnosis of pyloric stenosis of ulcer origin was established, thanks to oeso-gastroduodenal fibroscopy and/or oeso-gastroduodenal transite, by the presence of narrowing or complete occlusion of the pyloric lumen. Other causes of stenosis were excluded (cancer, caustic stenosis). The variables studied were sociodemographic (sex, age, profession), clinical, therapeutic and evolutionary. Data were analyzed using EPI software version 7.2.3.1. Qualitative data were presented in terms of frequency or percentage, and quantitative data were evaluated as mean and standard deviation.

RESULTS

During the 10-year study period, we collected 81 cases of ulcerative pyloric stenosis, representing 2.03% of all pathologies (n=3984). The mean age of patients was 48.96 ± 16.73 years, with extremes of 14 and 76 years. The patients were predominantly male (65.43%), with a sex ratio of 1.89. Farmers and housewives were the most affected (48.15%). The average consultation time was 6.31± 2.87 months, with extremes of 1 and 24 months. The main reasons for consultation were vomiting 96.30%, epigastralgia 95.06%, physical asthenia 79.01% and weight loss 75.31%. Medical history was dominated by epigastralgia (65.43%). The most common physical signs were fasting lapping 76.54%, peristaltic undulation 51.85%.

All patients received medical treatment with rehydration fluids, analgesics, antibiotics and proton pump inhibitors. General anesthesia was used. Patients were approached via median supraumbilical laparotomy (62.96%), median supra and subumbilical laparotomy (37.04%). Surgical procedures included gastro-jejunal bypass (85.19%), pyloroplasty + vagotomy (8.64%) and pyloroplasty alone (6.17%). Progression was straightforward in 73 patients (90.1%). Morbidity concerned (6.2%, n=5) patients with surgical site infection, and we recorded 3 deaths (3.70%). The average hospital stay was 16.7±5.2 days, with extremes of 6 and 29 days.

DISCUSSION

The advent of fibroscopy and the development of antiulcer drugs have considerably reduced the frequency of this chronic ulcer complication [4]. Vignon KC *et al*., [5], in Benin in 2015 reported a frequency of 0.6%. The mean age observed in our study was superposable with those of Konaté I *et al*., [1], in Senegal in 2010 and Vignon KC *et al*., [5], in Benin in 2015, who found 42.5 and 41.5 years respectively. The young age could be explained by the fact that young people are increasingly exposed to risk factors (alcohol, cigarettes, stress, etc.), and all the earlier in life.

The predominance of males in our study was also observed in studies carried out by Vignon KC *et al*., [5], in Benin and Konaté I *et al*., [1], in Senegal, who found 69.4% and 78.7% respectively in favor of males. Vomiting and epigastralgia were the most frequent revealing symptoms of stenosis in our study. These signs are consistent and found in several authors [2- 6].

Fasting lapping and peristaltic undulation were the main signs encountered. This differs from the findings of Rakotomena SD *et al*., [6], in Madagascar, who reported 10.20% fasting epigastric lapping and 6.12% peristaltic undulation. This difference suggests that in Guinea, patients often neglect epigastralgia, delaying adequate management of ulcer disease in the uncomplicated stage. On the other hand, there is the hypothetical role of self-medication by the population, which is still a public health problem in developing countries like ours.

Patients were often taken into care late, after an average delay of 6 months, hence the frequency of ionic disorders, undernutrition and deterioration in general condition. According to the literature, the length of time the stenosis has been evolving is detrimental [2- 7]. Preoperative correction of fluid and electrolyte disorders, anemia and malnutrition is essential for patient survival [7].

All patients had been prepared for surgery with gastric aspiration and resuscitation, depending on their clinical condition and guided by their biological results. Several authors [1- 5], are unanimous on the importance of this preparation, which is essential for successful surgery. In our study, the approach was median laparotomy in all patients operated on, whereas in the series by Konaté I *et al*., [1], in Mali (82%) of cases benefited from laparoscopic surgery and (18%) were operated on by laparotomy. Ousmane K *et al*., [2], in Senegal reported 94% laparoscopic surgery. Gastro-jejunal bypass was the most common surgical procedure. Kassegne I *et al*., [8], in Togo had performed a vagotomy associated with a gastric reeling procedure: truncal vagotomy 60%, associated with a pyloroplasty 32% or a gastro-jejunostomy 28%. In the series by Konaté I *et al*., [1], all patients benefited from a truncal vagotomy associated with gastroentero-anastomosis in 89.4% of cases.

Post-operative management was straight forward in most cases. In Benin, Vignon KC *et al*., [5], reported a 93.2% rate of immediate favorable outcome. Post-operative complications were essentially surgical site infections, confirming the work of several authors who found a high frequency of surgical site infections [9-11]. The deaths recorded in our series are linked to the slow evolution of the stenosis, which has an early impact. The relatively long average length of hospital stay could be explained by the delay in management.

CONCLUSION

Ulcerative stenosis of the pylorus is a symptom of the long evolution of ulcerative disease and delayed medical consultation of patients. It remains frequent in the general surgery department of the Ignace Deen National Hospital. Management was medical-surgical. The surgical procedures performed were dominated by a gastro-jejunal bypass.

Disclosure of Conflicts of Interest

- The authors declare that there were no conflicts of interest in the scientific writing of this work.
- Informed consent statement

- All authors appearing in this article share equally and agree to the publication of this article in your journal.

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