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Research Article

Management of Postoperative Hernias in Resource-limited Countries (Guinea)

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Abstract

Aim: the aim of the study was to contribute to the improvement of the management of ventrations in the general surgery department of CHU Ignace Deen. *Material and methods:* One-year retrospective descriptive study (January to December 2024), conducted in the general surgery department of CHU Ignace Deen. All complete patient records (medical observation, operative report and follow-up) admitted and operated on in the general surgery department during the study period were included. The variables studied were sociodemographic, clinical, therapeutic and evolutionary. *Results:* Out of 1,398 procedures performed, we recorded 51 cases of postoperative ventralization, representing 3.65% of the department's total activity. The mean age was 38.13±13.96 years, with extremes of 19 and 72 years. The 29 to 38 age group was the most represented (31.4%). Females predominated, with a sex-ratio of 0.5. Appendectomy (37.3%) and Caesarean section (29.4%) were the procedures most likely to result in ventricular deviations. Fourteen patients were referred (27.5%) and three were admitted as emergencies (5.9%). Abdominal swelling was the main reason for consultation (92.2%), and was located median subumbilically (41.2%). The mean diameter was 11.2±3.8 centimeter, with extremes of 5 and 18 cm. Cure was by mesh in 35 cases (68.63%) and by aponeuroplasty in 16 cases (31.37%). Postoperative recovery was straightforward in 49 patients (96.1%), with two cases of surgical site infection (3.9%). The average length of stay was 11.18±3.76 days. *Conclusion:* Eventrations are an increasingly frequent complication of conventional surgery (laparotomy). Treatment is essentially surgical. Progress in prosthetic techniques has reduced the risk of recurrence.

Keywords

Ventration, Anatomo-Clinical, Management, Guinea

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1. Introduction

A frequent complication of abdominal surgery, it occurs in 5-10% of patients after laparotomy [1-3]. This incidence may exceed 20% in patients at higher risk (obese, diabetic, midline laparotomy and surgical site infection) [3].

It is characterized by the protrusion of viscera through a defect in the abdominal wall, at the level of an operative scar, without skin rupture [4].

Several risk factors have been identified, including surgical site infections, obesity, postoperative coughing efforts, as well as technical factors related to parietal closure [5, 6]. In addition to the aesthetic and functional impact, ventration can give rise to serious complications such as strangulation, often necessitating revision surgery.

Management is based on surgical repair, ideally with a prosthesis, which reduces recurrence rates compared with simple stenting.

Despite its high incidence, the functional and economic consequences it entails, and recent advances in prevention and treatment, it remains a major issue in modern abdominal surgery.

The aim of the study was to contribute to improving the management of ventrations in the general surgery department of CHU Ignace Deen.

2. Material and Methods

one-year retrospective descriptive study (January to December 2024), conducted in the general surgery department of CHU Ignace Deen.

All complete patient records (medical observation, operative report and follow-up) operated on in the department during the study period were included. All incomplete files have been excluded. The sampling was simple random. The sample size was calculated using OpenEpi. The data collection was done on cobokollecet and the analysis on SPSS. The parameters studied were sociodemographic, clinical, therapeutic and evolutionary.

3. Results

Out of 1,398 procedures performed, we recorded 51 cases of postoperative ventralization, representing 3.65% of the department's total activity. The mean age was 38.13±13.96 years, with extremes of 19 and 72 years. The 29 to 38 age group was the most represented (31.4%), the other age groups are listed in Table 1.

Women predominated (64.7%), with a sex ratio of 0.5. They were housewives (43.2%), civil servants (33.3%), soldiers (9.8%), farmers (9.8%) and workers (3.9%). They lived in urban areas in 39 cases (76%). They were uneducated (54.9%), with primary (9.8%), secondary (21.6%) and university (13.7%) education. Fourteen patients were referred (27.5%) and three were admitted as emergencies (5.9%). Appendectomy (37.3%) and caesarean section (29.4%) were the procedures most likely to cause ventration, hernia repair (21.6%) and hysterectomy (5.9%). Hypertension was noted in 3 patients, diabetes in 2 and obesity in 3. Abdominal swelling was the main reason for consultation (92.2%), the other signs are shown in Figure 1. It was median subumbilical (41.2%), above and below umbilical (19.6%), above umbilical (9.8%) and at Mac Burney's point (29.4%). The mean diameter was 11.2±3.8 cm, with extremes of 5 and 18 cm. In 21 patients, it ranged from 10 to 15 cm, in 19 from less than 10 cm and in 11 from more than 15 cm. A pre-therapeutic workup was performed in all patients.

Cure was achieved by mesh placement in 35 cases (68.63%) and by simple raphe in 16 cases (31.37%).

Postoperative recovery was straightforward in 49 patients (96.1%). We noted two cases of surgical site infection (3.9%), one of which occurred when the cure was performed with mesh, which delayed healing, and the second with simple stinging. We noted two cases of recurrence, one of which occurred during mesh insertion. The average length of stay was 11.18±3.76 days. Forty-five patients were hospitalized for less than a week, and six patients were hospitalized for more than a week.

Table 1. *Patient distribution by age group.*

Age groups	Number	Percentage
19-28	14	27,45
29- 38	16	31,37
39- 48	12	23,53
49- 58	3	5,88
59- 68	3	5,88
≥ 69	3	5,88
Total	51	100

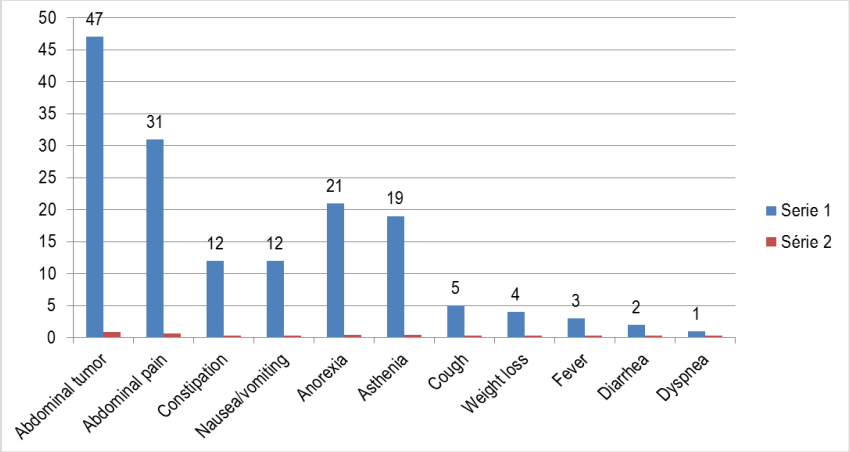

Figure 1. *Distribution according to the reasons for consultation.*

4. Discussion

The frequency of ventrations in our series is in line with data from a multicenter study in low-income countries, where the rate is around 3.91% after abdominal surgery, rising to 9.9% in the event of infection [7]. Worldwide, the rate is between 2% and 20% after laparotomy. [8, 9]

In Africa, the average age of onset is around 40.5 years [9, 10], whereas in developed countries it varies between 45 and 60 years.

In literature as well as in our study, they most often occur in the female subject [11, 12]. This reflects the high proportion of obstetric/gynecological surgeries in our cohort, with aggravating factors such as surgical site infection and poor parietal matching.

In our case, as elsewhere, swelling is the main triggering sign, often motivating consultation, all the more so when discomfort has become disabling in daily or professional activities [3, 13]. This swelling is the first sign to date, which for an aesthetic issue or functional genes sends the patient for a consultation, before the appearance of complications.

The diagnosis is primarily clinical, based on the observation of a reducible swelling, impulsive and expansive with coughing, topped by an operative scar. It is essential to alert patients to signs of acute complication (sudden pain, irreducibility, digestive disorders), so as to ensure early surgical management.

Numerous studies carried out in West Africa (Senegal, Burkina Faso, Niger) concur that prosthetic parietoplasty is now the reference method, with good medium-term results and a very low recurrence rate, although postoperative pain and infectious complications remain a concern [14, 15].

Conclusion: Eventrations are an increasingly frequent complication of conventional surgery (laparotomy). The increase in the workload of surgeons, gynecologists-obstetricians, the quality of medical devices, and the uneven practice of surgery by unqualified personnel would be largely responsible for the occurrence of hernias in our region. Diagnosis is often easy based on clinical presentation. Treatment is essentially surgical. Progress in prosthetic techniques has reduced the risk of recurrence.

Abbreviations

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Conflicts of Interest

The authors declare no conflicts of interest.

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