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Original Article

Post-Operative Peritonitis in the General Surgery Department at the Ignace Deen National Hospital : A Descriptive Study of 67 Cases

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Abstract

Aim : *To study the epidemiological, clinical, therapeutic and prognostic aspects of PPO in the General Surgery Department of the Ignace Deen National Hospital, Conakry, Guinea.*

Methods: *We conducted a retrospective study over a 5-year period from January 1, 2015 to December 31, 2019. It included all patients admitted to the General Surgery Department for postoperative peritonitis or who developed it during their hospitalization.*

Results: *Out of a total of 4,244 laparotomies, we collected 67 cases of postoperative peritonitis, or 1.57%. They represented 13% of all peritonitis treated in the General Surgery Department of the Ignace Deen National Hospital. There was a female predominance, or 54%. The average age of the patients was 28 years. The clinical picture was dominated by abdominal pain, abdominal defense, and fever, which were present in all patients, or 100%. Abdominal ultrasound contributed to the diagnosis in 89.6% of cases. The etiologies were dominated by ileal perforation 43.3%. The procedures performed during surgery were peritoneal toilet 100%, excision + suture 44.7%. The postoperative course was simple in more than half of the cases, i.e. 56.7%. The mortality rate was 19.4%. The prognostic factor was the prolonged time of evolution of PPO P-value = 0.014.*

Conclusion: *Postoperative peritonitis is rare in our department. When it occurs, its morbidity and mortality rates are high.*

Introduction

Postoperative peritonitis (PPO) is an infection secondary to surgery or more rarely digestive endoscopy, occurring after a first scheduled or emergency procedure, septic or clean (period <30 days)

Few studies have been conducted to define its frequency. Old studies report a reported incidence of 1.5% to 3.5% of laparotomies worldwide [1].

The contributing factors are technical imperfections, the duration of the procedure, local infection, obesity. Despite the improvement of resuscitation techniques, antibiotic treatments and progress made in the knowledge of their pathophysiological mechanisms, postoperative intra-abdominal infections remain a serious condition [2].

The very different microbiological situation from one geographical area to another led us to restrict our analysis to publications in the countries [3].

The objective was to study the epidemiological, clinical, therapeutic and prognostic aspects of PPO in the General Surgery Department of the Ignace Deen National Hospital.

Patients and Methods

This was a retrospective, cross-sectional study of a descriptive and analytical type covering all the files of patients admitted to the department for postoperative peritonitis and those who were complicated in the postoperative peritonitis department. It extended from January 1, 2015 to December 31, 2019 for a period of 5 years.

Results

During the study period on a total of 4244 laparotomies we collected 67 cases of postoperative peritonitis or 1.57%. The average age of our patients was 28 years with extremes of 12 and 47 years. There was a predominance of the female sex with a sex ratio M / F of 0.86. The average time of evolution was 8 days with extremes 4-14 days. Ileal perforations were the most common lesions (29 cases, or 43.3%), followed by suture failure of the appendicular stump (15 cases, or 22.4%). Peritoneal cleansing, excision + suture were the most common procedures (100% and 44.7%). The average length of hospital stay was 14 days, with extremes of 8 and 20 days. Complications were short-term, such as parietal suppuration (16 cases, or 23.9%). The survival rate in our series was 80.6% with a mortality rate of 19.4%. Prognostic factors

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were sought based on the postoperative course using a univariate analysis .

Discussion

During the study period on a total of 4244 laparotomies, we collected 67 cases of postoperative peritonitis or 1.57%.

This result is comparable to those of Bah A. M in Guinea [5] and Dossou F M. in Benin [4] who had reported respectively a frequency of 1.62% and 1.7%. It is however higher than that reported by Coulibaly B in Mali who had found a frequency of 0.15% [2].

This difference could be justified by the difference in the research methodology and the study period but also by the etiologies of PPO and/or by recruitment bias. The average age of our patients was 28 years with extremes of 12 and 47 years.

This result is lower than that of Nabil T [6] in Morocco who found an average age of 43.50 years, with extremes of 18 and 85 years. This age difference could be justified by the fact that the demographic profile of Guinea is that of a country with a very young population.

There is a predominance of the female sex with a sex ratio M/F of 0.86. This result was comparable to that of Dossou F M. in Benin [4] who observed a sex ratio = 0.89. This female predominance was contrary to other series [2,5] and was justified by the high inclusion in our sample of postoperative peritonitis secondary to Gyneco-obstetric surgery.

The average time to development was 8 days with extremes of 4-14 days. This delay could be justified by the reluctance of surgeons to refer patients in time despite the risk of death. Ileal perforations were the most represented lesions. Bengaly. S [7] had reported in his study that anastomosis and/or suture failure was the most significant in their studies. This high rate of ileal perforations in our study could be justified by the emergency context of the pathologies, the operative difficulties and the imprudence of the initial operator. Peritoneal toilet, excision + suture had been the most performed procedures. I agree with Bensignor T on one point for whom peritoneal toilet and resection-anastomosis had been the most observed [8].

This sufficiently demonstrates that peritoneal toilet is imperative in the face of any intraperitoneal sepsis. But the observed difference could be justified by the etiologies of PPO.

The average length of hospital stay was 14 days and extremes 8 and 20 days.

Complications were short term such as parietal suppuration.

The survival rate in our series was 80.6% with a mortality rate of 19.4%; this result would be lower than that of Simo N who in his study reported a mortality rate of 60% [9].

This difference could be due to our attitude to intervene as soon as possible as soon as the diagnosis is confirmed. Once the diagnosis was confirmed, all our patients were re-operated within 72 hours.

Figure 1. *Postoperative stercoral fistula previously operated for acute generalized peritonitis by ileal perforation.*

The prognostic factors had been sought according to the postoperative course through a univariate analysis. Our variables were: the patient's age, sex, terrain, and the time of evolution of PPO. The chi-square test was for the variables with a confidence interval that we set IC = 95%, so any P-value of a variable less than 0.05 is significant, but greater than 0.05 is not significant. We obtained after the analysis that only the P-value of the prolonged delay of evolution of PPO was significant with a P-value = 0.014.

At the end we retained: the prolonged delay of evolution of PPO as a prognostic factor of postoperative peritonitis in our series.

This is explained by the fact of a delay of consultation, the trivialization by the initial operators of the complaints (postoperative pain, fever) of the patients, pushing them to self-medication (analgesics) but also delay of diagnosis.

Despite the progress in the management, the prognosis of PPO remains always bleak. Its improvement is based on an early diagnosis with a careful analysis of the different risk factors of mortality.

Conclusion

Postoperative peritonitis has relatively high morbidity and mortality rates and is prevalent in young female subjects.

The etiology was dominated by ileal perforations.Treatment of the infectious source is fundamental by surgery in the management of PPO. At the same time, probabilistic antibiotic therapy is administered as soon as the diagnosis is made and must integrate local epidemiological conditions but also the presence or absence of prior antibiotic therapy.

The prognosis is based on early diagnosis and multidisciplinary management involving surgeons, radiologists and anesthesiologists-resuscitators.

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