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Original Research Article

Study of Generalized Peritonitis in Children at the Hospital Fousseyni Daou of Kayes: Mali

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Abstract: ***Introduction:*** Peritonitis is an acute inflammation of the peritoneum; it is a surgical emergency in children, as in adults. It is still common in underdeveloped countries because of the delay in diagnosis. There are primary and secondary peritonitis. The main symptom is violent and sudden abdominal pain in children. The objectives were to determine the hospital frequency of peritonitis, to describe the clinical and therapeutic aspects, to evaluate the mortality of peritonitis. This was a retrospective study that took place in the pediatric surgery department from January 2019 to December 2021; using patient records. All patients operated for peritonitis from 0 to 15 years old were included in this study. ***Results:*** During this study, we performed 650 surgeries, including 23 cases of peritonitis, or 3.53% of the surgeries. The ages were between 4 and 15 years old, the male sex was predominant, i.e. 65.21%: 15 cases. The average consultation time was 7 days. The clinical signs were dominated by abdominal pain in 100% of cases, asthenia and deterioration in general condition. All the patients had benefited from a biological assessment, the widal was positive in 12 cases. Abdominal X-ray without preparation and abdominopelvic ultrasound were performed in all patients. Abdominal X-ray without preparation objectified 6 cases of pneumoperitoneum, water levels in 10 patients. Ultrasound showed 16 cases of appendicular peritonitis, i.e. 69.56%. All patients underwent laparotomy and we found 16 cases of appendicular peritonitis 69.56%, 5 ileal perforations i.e. 21.73%, 1 perforation of the gallbladder i.e. 4.34% and tuberculous peritonitis confirmed by pathology 4.34%. The postoperative course was simple in 65.21%, parietal suppuration was observed in 21.73% of patients. We had recorded 3 cases of death or 13.04%.

Keywords: Peritonitis, child, Kayes.

INTRODUCTION

Peritonitis is defined as the generalized or localized acute inflammation of the peritoneal serosa most often of infectious origin, it can also be organ perforation. It is a frequent and serious surgical emergency, especially in developing countries where patients are seen late. Diagnosis is clinically based, typically looking for abdominal contracture or sometimes defense, which is difficult to assess in children. The etiologies are multiple, the etiological diagnosis is important to seek by referring to the anamnesis, the clinical examination and the complementary examinations. The treatment is surgical supervised by resuscitation with pre-per and postoperative antibiotic therapy. Surgery consists of eradicating the cause, washing and intraperitoneal drainage. The prognosis depends on the terrain, the cause, but above all on the quality of care.

The objectives were to determine the hospital frequency, to describe the epidemiological-clinical and therapeutic aspects but also to evaluate the mortality of peritonitis.

MATERIALS AND METHODS

This retrospective study was conducted at the Fousseyni Daou Hospital in Kayes from January 2019 to December 2021. All patients operated on for

peritonitis aged 0 to 15 hospitalized in the pediatric surgery department were included in this study. All had been put on antibiotics pre, per and postoperatively. During this time we had not recorded any peritonitis below 4 years.

RESULTS

During this study of 650 surgical operations, we operated on 23 peritonitis, i.e. 3.53% of the operations. The ages were between 4 years and 15 years, the male sex was predominant with 65.21% against 34.78% of the female sex table 1. All the patients presented with diffuse abdominal pain with 15 bellies of wood typical of peritonitis, a deterioration of general condition and fever. At the ASP (abdomen without preparation), we found 6 cases of pneumoperitoneum and hydro-aeric levels in 10 patients simulating an occlusive syndrome. The ultrasound had objectified 16 cases of appendicular peritonitis. The laparotomy had allowed us to confirm the 23 cases of peritonitis. This is how we found 16 cases of appendicular peritonitis, 5 cases of ileal perforations, 1 perforation of the gallbladder and 1 tuberculous peritonitis confirmed on the pathology table3. In the cases of appendicular peritonitis, we proceeded to an appendectomy, intraperitoneal lavage and placement of drains. In the cases of ileal perforations we proceeded in 3 patients to a reviving of the edges and suture, a resection end-to-end anastomosis in 1 case, an ileostomy in a patient with end-to-side ileocolic anastomosis one month after his laparotomy. We had performed a cholecystectomy in the patient who had presented a perforation of the gallbladder always followed by lavage drainage. The postoperative course was simple in 65.21%, we recorded 5 cases of parietal suppuration 21.73% and 3 cases of death, i.e. 13.04%.

DISCUSSION

We conducted a retrospective study over 24 months, from January 2019 to December 2021. The study involved 23 patients operated on for peritonitis in the pediatric surgery department. The patients were identified from the patient's hospitalization records. Peritonitis represented 3.53% of the interventions carried out in our department, i.e. approximately 11 peritonitis per year, comparable to that of Keita M [1]. The average age was 7 years old and patients aged 4 to 9 years were more numerous table 2. The male sex was more predominant at 65.21%. In our study abdominal pain, fever, asthenia, deterioration of general condition, were present in all patients. This type of table is found by many other authors [1, 9-11]. The deterioration of the general state in our patients can be explained by the fact that they consult late because of the attendance of traditional therapists. Abdominal X-ray without preparation carried out in all the patients had revealed 6 cases of pneumoperitoneum suggesting perforations, the ultrasound was of great contribution by confirming 16 cases of appendicular peritonitis. The laparotomy was carried out in all our patients. Appendicitis was the main cause of our peritonitis 69.56%, as in other studies [1-3, 9], followed by ileal and gallbladder perforations. On the other hand, Benabdella, Ashraf found typhoid fever as the first cause, ie 60% [12].We had considered these perforations to be of typhoid origin because their widal serology was positive and also presented a long-term fever for more than 2 weeks. We had fortuitously discovered peritoneal tuberculosis which simulated an appendicular syndrome and which was confirmed by pathology. fig3.The treatment was medico-surgical as for the other authors [2-5, 8]:!. All patients underwent preoperative and postoperative antibiotic therapy. At the laparotomy, in patients with appendicular peritonitis, we carried out an appendectomy fig 2, plus washing and drainage. The patients who presented ileal perforations fig1, we performed a suture refreshment in 3 patients; an end-to-end anastomosis resection fig4 in one patient, end-to-side anastomosis resection in one patient. A cholecystectomy was performed in the patient with biliary involvement and finally tuberculous peritonitis was put on standard anti-tuberculosis drugs under clinical supervision. The postoperative course was simple in 65.21%, 5 cases of parietal suppuration 21.73% and 3 cases of death i.e. I3.04% table 4. This high rate of death can be explained by the delay in taking charge of the patients and the lack of well-equipped intensive care units in developing countries.

Fig. 1: Ileal perforation

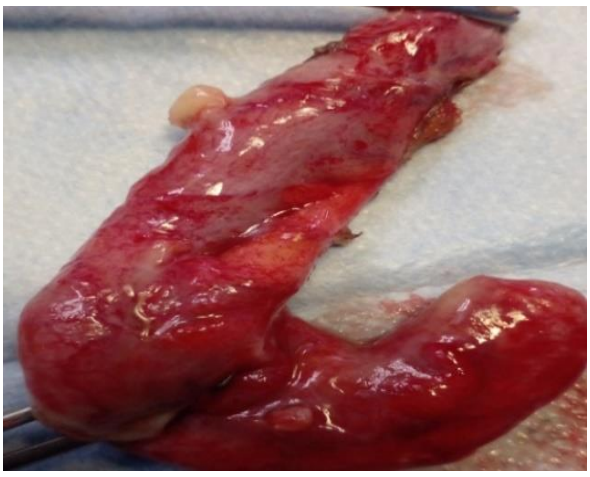

Fig. 2: Appendectomy

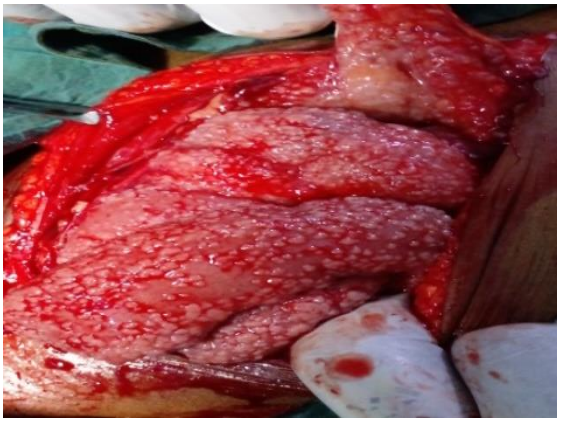

Fig. 3: Tuberculosis peritonitis

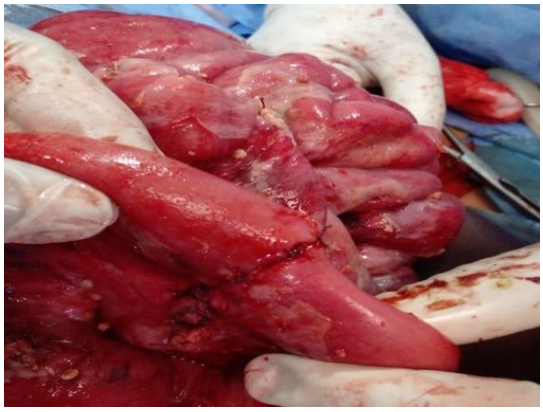

Fig. 4: Ileo-ileal anastomosis

Table 1: distribution of patients by gender

Gender	Number	Percentage
Male	15	65,21%
Feminine	8	34,78%
Total	**23**	**100%**

Table 2: Distribution of patients by age

Age	Number	Percentage
4-9 years old	14	60,86%
10-15 years old	9	39,13%
Total	**23**	**100%**

Table 3: Distribution of patients according to type of peritonitis

Type of peritonitis	number	Percentage
appendicular	16	69,56%
Ileal perforation	5	21,73%
Gallbladder perforation	1	4,34%
tuberculosis	1	4,34%
total	**23**	**100%**

Table 4: Breakdown by post-operative course

Surgical follow-up	Number	Percentage
simple	15	65,21%
suppuration	5	21,73%
death	3	13,O4%
total	**23**	**100%**

CONCLUSION

Peritonitis is a surgical emergency especially in young subjects. They are still very common in developing countries. Diagnosis is mainly clinical and treatment is medical and surgical. The most common etiology is appendicitis.

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