

ORIGINAL ARTICLES

Peritonea-vaginal canal pathologies at Regional Hospital Center of Lomé-Commune (Togo): Epidemiological, anatomoclinical and therapeutic aspects

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ABSTRACT

Objective: To describe epidemiological, anatomo-clinical and therapeutic aspects of peritoneo-vaginal canal pathologies (PVCP).

Methods: We performed a retrospective and descriptive study on the files of PVCP cases operated in Lomé-Commune Regional Hospital (Togo). The study data concerned: the age, the occurring mode, anatomo-clinical classification, the side and treatment outcomes.

Results: 107 files were collected from January 2011 to December 2015. The average age was 9.2 ± 8 years with a range from 16 months to 47 years. Twelve patients were less than 2 years and 14 patients were adults. The main consultation motive was an intermittent and painless inguinal or inguino-scrotal swelling in 89 cases (83.18%). The PVCP was in the right side in 66 patients (61.68%) and bilateral in 8 patients (7.47%). Concerning anatomo-clinical types, inguinal or inguino-scrotal hernia were more frequent (62.6%). The treatment was surgical in all cases and the average hospital stay was 2.1 days. The operative follow-up was satisfactory in 94.3%. However, we noticed 4 cases of scrotal hematoma and 2 cases of parietal suppuration. The mortality rate after surgery was zero. One year back, we noticed two cases of testicular atrophy.

Conclusions: Pathologies of the peritoneo-vaginal canal are frequent in our surgical practice. Inguinal hernia and inguino-scrotal hernia are more represented. The surgical treatment results are successful.

Key Words: Peritoneo-vaginal canal, Hernia, Hydrocele, Treatment, Togo

1. INTRODUCTION

The peritoneo-vaginal canal, which is the emanation of the peritoneal cavity, appears during the third month of intra-uterine life. It obliterates progressively between the eighth and ninth months so to become the Cloquet ligament. A

lack of closure of this canal leads to peritoneo-vaginal canal pathologies (PVCP).^[1-3] Most of the PVCP studies were done by pediatric surgeon's teams who focused either on the child's hernia or complications, or on laparoscopic management.^[2,4-6]

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In African countries, as in Togo, PVCP is a frequent malformation managed in teaching hospitals by pediatric surgeons^[2,6,7] and by urologists,^[8,9] whereas in suburbs hospitals they are managed by general surgeons.^[10]

The aim of this work was to report our experience in the management of the PVCP, in our general surgical department in a suburb hospital center in Togo, emphasizing the epidemiological, anatomico-clinical and therapeutic aspects. This study has considered only operated patients.

2. SUBJECTS AND METHODS

This is a retrospective, descriptive study on the files of patients operated from a PVCP in our general surgical department in a suburb hospital (Regional Hospital Center [RHC] of Lomé-Commune in Togo) from 1st January 2011 to 31st December 2015. Non-operated patients and patients operated from testicular migration abnormalities (oscillating testis and cryptorchidism) were not included in the study. The diagnosis of PVCP was done on a clinical exam (anamnese and physical exam) or intraoperative data. The following data were studied: the age, the occurring mode, anatomico-clinical classification, the side and treatment outcomes.

3. RESULTS

During the study period, 478 patients were operated from an inguino-scrotal swelling. Among them, 107 (22.3%) had peritoneo-vaginal canal persistence. Twelve patients were aged less than 2 years and 14 were adults. The average age was 9.2 ± 8 ranging from 16 months to 47 years. The consultation motive was an intermittent and painless inguinal or inguino-scrotal swelling in 89 cases (83.18%), a painless large purse ($n = 12$), and painful inguinal-scrotal swelling ($n = 6$). Symptoms were existing since birth in 95 patients (88.78%) whereas in 12 cases, the occurrence mode was progressive. The PVCP was in the right side in 66 patients (61.68%) and bilateral in 8 patients (7.47%). Anatomico-clinical types were inguinal and scrotal hernia in 62.6% of cases followed and hydrocele in 16% of cases (see Table 1). All the 6 patients with strangulated inguino-scrotal hernia were adults.

Table 1. Repartition of types of PVCP anatomoclinical

Type of anatomoclinical	Number (n)	Pourcentage (%)
Inguinale/scrotale Hernia	67	62.6
Communicative Hydrocele (CH)	15	14
Non communicante Hydrocele (NCH)	12	11.2
Cordon Kyst (KC)	7	6.6
Inguinal-scrotal strangulated Hernia (ISEH)	6	5.6
Total	107	100

The operation was performed under general anesthesia with orotracheal intubation for children of 16 months to 12 years and for adults with strangulated hernias. For other patients, it was a spinal-anesthesia. The inguinal approach was used for all patients. There was no laparoscopic approach. The peritoneo-vaginal canal was closed using vicryl 2/0 in all patients. That closure was associated to the Bassini hernia cure with Mersuture 1 in adults. There were no necroses of handles. The patients were under antibiotics (Amoxicillin-clavulanic acid) and analgesic (paracetamol) in postoperative. The mean hospital stay was 2, 1 day with a range from 2 to 6 days.

The operative follow-up was satisfactory in 94.3%. There were 4 cases of bursa haematoma and 2 cases of parietal suppurations. The hematomas regressed under anti-inflammatory treatment and suppurations were treated using antibiotics and local care. The postoperative mortality was zero.

One year back, we noticed 2 cases of testicular atrophy in two patients who had developed a scrotal hematoma in postoperative. No recurrence was noticed.

4. DISCUSSION

The PVCP is a frequent pathology, and Fiogbé et al. in Benin, noticed that PVCP was the most common clinically visible urogenital malformation after varicocele.^[11] It was 22.2% in our series. According to Wang KS,^[12] the prevalence of PVCP would be nearly 80% in newborns and the risk of symptomatic manifestations decrease with age, the peritoneo-vaginal canal may still close spontaneously after birth. Sarr A et al.^[8] in Dakar had counted 163 cases in five years. In our series, the non-strangulated inguino-scrotal hernia was the most frequent anatomico-clinical type followed by the communicating hydrocele. This predominance was found by Sewa et al.^[10] On the other hand, in the series of Sarr et al.,^[8] it was rather the communicating hydrocele which was the first anatomico-clinical form. The PVCP were most often on the right side. The predominance of the right side has been reported by many authors.^[2-4,8,13] The average age of our patients was 9.2 ± 8 years. This age is comparable to that of Sewa et al.,^[8] and Sarr et al.^[10] who reported both children and adults. On the other hand, according to the literature, this average age is much lower and varies between 8 months and 4 years.^[2,11,14] This is due to the fact that these authors reported only pediatric findings. Although PVCP is a frequent malformation of a child, it's can also be found frequently with adults (13.08% of our sample). The frequency of PVCP in adults could be explained by the modesty that generally affects the external genital diseases in Africa, but also by the low level of incomes of the popu-

lation which does not allow them to consult in specialized hospitals.^[10-12] Inguinal hernia in children may progress to strangulation, which in addition to intestinal lesions may result in ischemic testicular sequelae.^[3,14] Thus, Uemura et al. as well as Galinier et al. recommended that any inguinal hernia diagnosed in an infant should be operated earlier in order to avoid strangulation.^[15,16] We have not had cases of strangulated hernia in children. This is due to the fact that children admitted for emergency surgical conditions are often referred to Teaching hospitals because of anesthetic safety. Indeed, the teams of anesthetic nurses with whom we work are not all trained to manage pediatric anesthesia. There is only one trained nurse who is solicited only for pediatric regulated surgery. In principle, according to the pathogenesis of PVCP hernias, a simple closure of the hernia bag should be sufficient for the cure. In order to prevent the risk of hernia recurrence in adults, we performed a parietal reinforcement by a herniorrhaphy according to Bassini technique. There was no laparoscopic treatment. This equipment is only available in one Teaching hospital of the country. The classic method, however, is not free of post-operative complications: it can cause vas deferens damage, damage spermatic vessels or promote recurrence.^[17,18] It is for this reason that special attention must be given to intraoperative treatment when this approach is used.^[1,2] Laparoscopic approach helps to systematically explore the contralateral side, which reduces the incidence of misdiagnosis; it also reduces the risk of vascular and differential damage.^[4,9] For more than two decades, several authors have used the laparoscopic pathway for the treatment of PVCP with good results.^[4,19-21] In our

series, 12 patients (including 4 cases of hernia) less than 2-year-old had been operated when they could legitimately be monitored to determine whether the PVCP was regressive. There is then an ethical and medico-legal problem of the possibility of operating a benign pathology, potentially resolving before the second year of life, especially since the surgical intervention is not free from morbidity. Indeed, any inguinal surgical exploration, even in trained hands, generates a risk of iatrogenic defect or vascular injury that is why 65% of US pediatric surgeons operate in principle, boys for PCPV only after 2 years.^[22] However, the potential risk of strangulation had led us to operate all children even those under the age of 2. It is often difficult for parents in our countries to respect appointments. Many of them are not educated. They are very often surprised when strangulation occurs.

We have noted 4 cases (3%) of bursa haematomas and 2 (1%) cases of testicular atrophy similar to the Sarr and al series.^[8] However, in the pediatric series, the incidence of late complications was lower (less than 1%).^[2,11] The lack of pediatric instruments in our structure for the management of PVCP and the traditional approach can explain this morbidity rate.

5. CONCLUSIONS

Pathologies of the peritoneo-vaginal canal are frequent in our surgical practice. Inguinal and inguino-scrotal hernia are the most frequent. The surgical treatment results are successful.

CONFLICTS OF INTEREST DISCLOSURE

The authors declare they have no conflict of interest.

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