

Pathologies of the Peritonea-vaginal Canal in the General Surgery Department of the Reference Health Center of the CVI Commune of the Bamako District

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Abstract

Summary: Pathologies of the peritoneal vaginal canal (CPV) are congenital disorders due to the persistence of the peritoneal vaginal canal beyond birth.

Objective: To study the pathologies of CPV in the general surgery department of the CSRéf CVI in Bamako.

Methodology: This was a 10-year descriptive retrospective study including the records of patients operated on and monitored for PCPV in the general surgery department of the Csréf CVI in the district of Bamako.

Results: Over 10 years, we collected 266 records of pathologies of the peritoneal vaginal canal which represented 1.43% of all consultations, 8.75% of all surgical interventions and 54.62% of the total. set of pediatric interventions. The average frequency per year was 26.6 cases of the pathology of CPV. The average age was 1.73 +/- 1.33 years with extremes of 1 year and 15 years. Infants were the most represented with 118 cases (44.36%). The male sex represented 98.12% of cases. Premature children accounted for 17 cases (6.39%). The most frequent reason for consultation was intermittent scrotal swelling in 92 cases (34.59%). The swelling was inguino-scrotal in 96 cases (36.09%). The swelling was soft in 259 cases (97.37%). Scrotal ultrasound was performed in 13 cases, or 4.89%. The inguino-scrotal hernia was the most accepted diagnosis in 92 cases, i.e. 34.59% of cases. Pott's herniotomy was the surgical technique used in 195 cases (73.31%). The length of hospitalization of less than 12 hours after the operation represented 254 cases (85.49%). The immediate course was simple in 255 cases (95.86%), hematoma 8 cases (3.01%), Wall suppuration 3 cases (1.13%), and 2 cases (0.75%) of recurrence during evolution after 6 months.

Conclusion: The pathologies of CPV operated by general surgeons and on an outpatient basis had simple consequences in our department.

Keywords: CPV Pathologies; General Surgery; Outpatient Surgery; Csréf CVI

Introduction

Pathologies of the peritoneovaginal canal (PCPV) are congenital conditions due to the persistence of the peritoneovaginal canal

beyond birth [1]. This canal is an emanation of the peritoneal cavity [1]. Depending on the extent of the defect in regression of the canal one can meet inguinal, inguino-scrotal or ovarian hernias,

cord cysts, hydroceles communicating or not [2]. They are the most common pathologies of infants [3]. In developed countries, such as France and the United States, the incidence of inguinal hernias in children is between 1 and 5% [4]. In developing countries, there are few studies on this condition of the child.

In Morocco in 2018, PCV pathologies in boys accounted for 0.3% of hospitalizations [5]. In Mali, in 2018, AMADOU I reported a hospital frequency of CPV pathologies of 5.5% in pediatric surgery at the Gabriel Touré University Hospital [2]. At the CS Ref of the CVI of the district of Bamako in 2016 inguinal hernias accounted for 47.62% of all surgical interventions in children [6]. When it comes to a hernia, the clinical diagnosis is made in front of the appearance of inguinal or inguino-scrotal swelling during crying or pushing efforts. Being a non-communicating hydrocele or cyst, the swelling is permanent, painless and trans-illuminating. Pathologies most often benign, hernias can be complicated by strangulation that can be lethal or infatuation. Treatment is surgical, but the operative indication depends on age, the nature of the pathology and the occurrence of complications.

Following our study on inguinal hernias of children in 2016, at the CS Ref of the CVI of Bamako we had initiated this work to study the pathologies of the CPV.

Objectives

To determine the frequency of CPV pathologies; to describe the diagnostic, therapeutic and evolutionary aspects of CPV pathologies; Identify the different pathologies of the CPV encountered in the general surgery department of the CS Ref of the CVI.

Methodology

This was a retrospective cross-sectional study of patients operated on for pathologies of the peritoneal vaginal canal in the General Surgery Department of the CS Ref of the CVI; over a period of 10 years, from December 2008 to December 2018. The inclusion criteria: were children under 16 years of age, operated in the department in the general surgery department for a pathology of the peritoneal-vaginal canal, namely: (Inguinal hernia, Hydrocele, Cord cyst. Parameters studied.

Data was collected from consultation registers; patient records; operating report registers; telephone calls to patients included in our study. We entered and encoded our data on the Epi-info data

7.2.2.6 software. These data have been previously checked and cleaned before any exploitation. Data entered on Epidata 7.2.2.6 were exported to SPSS version 21 software for analysis.

Results

Over 10 years, we collected 266 cases of pathologies of the peritoneal vaginal canal, which represented 1.43% of all consultations, 8.75% of all surgical procedures and 54.62% of all pediatric interventions. The average frequency per year was 26.6 cases of CPV pathology. The average age was 1.73+/-1.33 years with extremes of 1 year and 15 years. Infants were the most represented with 118 cases (44.36%). Mâle accounted for 98.12% of cases. Preterm infants accounted for 17 cases (6.39%). The most common reason for consultation was intermittent scrotal swelling in 92 cases (34.59%); Table 1. Swelling was inguino-scrotal in 96 cases (36.09%). The mode of onset was gradual in 143 cases (53.76%). The pathology was asymptomatic in 257 cases or 96.62%. The right side was the most represented with 172 cases or 64.66%. Swelling was mild in 259 cases (97.37%). Swelling was reducible in 217 cases or 81.6% of cases. Scrotal ultrasound was performed in 13 cases or 4.89%. Inguino-scrotal hernia was the most widely accepted diagnosis in 92 cases or 34.59% of cases; Table 2. Pott's herniotomy was the surgical technique used in 195 cases (73.31%); Table 4. The average duration of the intervention for all pathologies of the persistence of the CPV was 26.33mn in our study. The average length of hospitalization was 8 hours with the extremes of 5 hours and 24 hours. The immediate course was simple in 255 cases (95.86%), hematoma 8 cases (3.01%), Parietal suppuration 3 cases (1.13%), and 2 cases (0.75%) of recurrence during the course after 6 months.

Motif	Actual	Percentage
Permanent scrotal swelling	55	20,68
Intermittent scrotal swelling	92	34,59
Permanent Swelling inguno-scrotal	14	5,26
Intermittent groin-scrotal swelling	50	18,80
Permanent inguinal swelling	3	1,13
Intermittent inguinal swelling	48	18,06
Painful swelling	4	1,50
Total	266	100,00

Table 1: Distribution of patients by reason for consultation.

The reason for consultation was intermittent scrotal swelling in 92 cases or 34.59%.

Diagnostic	Actual	Percentage
Groin-scrotal hernia	92	34,59
Communicating hydrocele	37	13,91
Inguinal hernia	88	33,08
Spermatic cord cyst	6	2,26
Hernia+ hydrocele	4	1,50
Non-communicating hydrocele	35	13,16
Strangled inguinal hernia	2	0,75
Strangled inguino-scrotal hernia	2	0,75
Total	266	100,00

Table 2 : Distribution of patients by diagnosis.
Inguino-scrotal hernia was the diagnosis in 92 cases (34.59%).

Surgical procedure	Actual	Percentage
Pott's herniotomy	195	73,31
Pott's herniotomy + excision of the vagina	57	21,43
Cystectomy + Pott Herniotomy	6	2,26
Pott herniotomy + Anastomosis resection	3	1,13
Pott herniotomy + orchidopexy	5	1,88
Total	266	100,00

Table 3: Distribution of patients by surgical procedure.
Pott's herniotomy was the surgical technique used in 195 patients or 73.31%.

Evolution	Frequency	Percentage
simple	261	98,12
Keloid	3	1,13
Testicular ascent	2	0,75
Total	266	100

Table 4: Distribution of patients according to the evolution at 3 months.

Image 1: Right hydrocele in a 5-year-old boy at transillumination.

Image 2: Right hydrocele in a 5-year-old boy.

Image 3: (pre-op): strangulated right inguinal hernia in a 6-year-old boy.

Image 4: (Horizontal incision): strangulated right inguinal hernia in a 6-year-old boy.

Image 5: (per-op): contents of the small bowel sac without necrosis.

Image 6: (post-op): skin closure after hernia repair

Discussions

For 10 years we have recorded 266 cases of CPV pathologies or 1.43% of hospital frequency. This rate is lower than the 20% reported by SEWA [7] in Togo (p: 0.0002). This frequency is underestimated because some cases are supported in other services. BASTIANI [3] states that it is the most common pathology of the infant. Pathologies of CPV are very common in infants. They are not uncommon in the newborn especially in case of prematurity. The average age of 1.73 years of our patients is close to that of KALANTARI [8] in Iran which recorded an average age of 2 years.

Pathologies of CPV occur frequently in boys than in girls probably because of the role played by testicular migration in this

pathology that does not exist in girls. DENA [9] and NGOM [10] recorded a ratio of 28 and 40.6 respectively lower than in our series. This could be explained by a recruitment bias.

The common character of CPV pathologies is swelling. This swelling can be permanent or intermittent, scrotal or inguino-scrotal depending on the case. It was the reason for consulting all our patients, just like in the series of MIERET [11] and NDIAYE M [1]. Swelling of the inguinal, scrotal and/or inguino-scrotal region is the most constant and revealing physical sign. We have noted it in all our patients. DIAME [12] scored it in 72.5% and HAROUNA [13] 96% (p: 0.000). Pathologies of CPV include hernia, cord cyst and hydrocele with a clear predominance of hernia. Our data are consistent with those of the literature [4,7,10,14] unlike SARR [15] which rather recorded a predominance of hydrocele (72%). This could be explained by a recruitment bias on his part because his patients were recruited in general surgery and pediatric surgery. Involvement of the right side is classically described in the literature. We recorded 64.3% involvement on the right side against 28.2% on the left side and 7.9% on both sides. Our data agree with those of Senegalese, Ivorian and Malian authors [26,28,34] (p > 0.05). The classic surgical treatment of hernias is the upper closure of the peritoneal vaginal canal or Nüeck according to Pott. We have achieved this in all cases. This rate is higher than that of DENA [9] which performed the same technique in 94.3% (p: 0.0100). LIPKAR [17] in 2009 in the U.S.A. and CHAN [18] in Taiwan in 2010 practiced the cure under laparoscopy. This technique has the advantage of making the diagnosis of a contralateral latent hernia thus sparing the child a second surgical intervention. The evolution of these pathologies of the CPV is most often favorable. The immediate complications recorded are common to any surgery and cannot be attributed to these pathologies. These were mainly hematoma and infection of the surgical site and in particular the section of the spermatic duct. Our overall immediate complication rate of 4.14% is lower than that of DIARRA F [4] (7.9) but higher than that of NGOM [16] (1.6%) (p < 0.05). Manipulation of the cord and testicle during the cure exposes to the risk of testicular retraction or testicular atrophy in the medium or long term. Recurrences are most often related to insufficient ligation of the canal. After a decline of 6 months, only 6 of our patients or 2.26% had testicular retraction. The same complications have been reported in the literature [4,5,19].

Conclusion

At the end of our study, the pathologies of the CPV supported by general surgeons have simple consequences in the general surgery department of the reference health center of the commune VI. The first place among these pathologies is occupied by the hernia. They preferentially affect male infants. CPV pathologies represented 1.43% of all consultations and 54.62% of all pediatric interventions. The hernia (76.8%), the hydrocele (20.8%), the cyst (2.4%) constituted the different entities of pathologies encountered. The diagnosis is clinical, based on inguinal and/or scrotal swelling. Hernial strangulation was the progressive risk in 1.50% of cases. The treatment depends on the pathology. Morbidity is low and mortality is nil. We therefore recommend endowing our department with pediatric surgery equipment and strengthening our team with pediatric surgeons.

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