

## Children Gynecological emergencies at the regional hospital of Ziguinchor: Diagnosis and management

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### **ABSTRACT**

Gynecological emergencies are rare in children. The goal of this study is to make a report about the epidemiological, clinical, therapeutic and evolutive aspects of gynecological emergencies in children at the Regional Hospital of Ziguinchor.

### **PATIENTS AND METHODS**

The study which is mainly retrospective and descriptive was conducted from January 2014 to June 2018 on children admitted for gynecological emergencies at the Regional Hospital of Ziguinchor.

### **RESULTS**

Seventeen patients have been listed. The average age was 4.65 years (range 3 days and 13 years). Abdominopelvic pain was the main circumstance of discovery. Physical examination found an abdominopelvic mass and a defense in 52.97% of cases. A bulge of the hymen was found in nine patients, and a mass exteriorized through the vaginal opening in one patient. In terms of diagnosis, we noted eleven cases of hydrometrocolpos, five cases of hemorrhagic urethral prolapse, and one case of uterine prolapse. Eleven patients had a partial resection of the hymen with aspiration of pus, five underwent resection of the urethral mucosa, and one case of genital prolapse experienced reduction with suturing of the labia majora. Evolution was favorable in 16 patients, and one case of death from septic shock was noted. Seldom are gynecological surgical emergencies described in the literature, and mostly fall within the framework of malformation.

### **KEYWORDS**

Emergencies; Gynecology; Child; hydrometrocolpos

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## **1. INTRODUCTION**

Gynecological emergencies are rare in children [1-5]. Mainly malformative, they can affect the urethra, the vagina, and the uterus [1-5]. Due to malformative origins their diagnosis should be done earlier, and better during the prenatal period. The aim of this work is to make a report about the epidemiological (age, sex) clinical (physical examination results), therapeutic and evolutive aspects of gynecological emergencies in children at the Regional Health Center of Ziguinchor.

## **2. PATIENTS AND METHODS**

A retrospective and descriptive study was conducted from January 2014 to June 2018. All patients aged between 0 to 15 years admitted for gynecological emergencies in the emergency department, the surgery and maternity department of the regional hospital center of Ziguinchor have been listed. The parameters studied were the epidemiological, clinical, therapeutic and evolutive aspects of gynecological emergencies in children. The data were processed using Microsoft Excel 2013.

## **3. Results**

### ***3.1 Epidemiological aspects***

Seventeen patients have been listed. The average age was 4.65 years with extremes of 03 days and 13 years. Twelve patients were Senegalese and 5 patients came from neighboring countries (Guinea and Gambia). Eleven patients presented hydrometrocolpos with an average age of 5.8 years (extremes of 2 years and 13 years). Urethral prolapse was present in five patients with an average age of 4.5 years (range 3 and 5 years). The newborn received for uterine prolapse was admitted two days after birth.

### ***3.2 Clinical aspects***

Abdominopelvic pain was the main finding, followed by genital bleeding. The details of the discovery circumstances are summarized in Table 1.

Discovery circumstances	number	Percentage
Abdominopelvic pain	8	47,4
Genital bleeding	5	29,41
Genital prolapse	1	5,8
Pelvic pain	3	17,64
Total	17	100

**Table 1:** Details of the circumstances of discovery

### ***3.3 Physical exam***

Physical examination showed an abdominopelvic mass with a bulging hymen in 11 patients (figure 1). Urethral prolapse was found in five patients while (figure 2), a newborn had uterine prolapse (figure 3).



**Figure 1:** Imperforated hymena causing hydrocolpos



**Figure 2:** Urethral prolapse causing genital hemorrhage



**Figure 3:** Uterine prolapse in a newborn

### ***3.4 Paraclinical exploration results***

Numeration and blood count found hyperleukocytosis greater than 12000 and positive CRP in 7 patients. Anemia with hemoglobin below 10 g/dl was present in 5 patients. Nine patients had an abdominopelvic ultrasound which showed a developed fluid mass on the uterus, and three of the nine patients showed uretero-hydronephrosis stage 2. One patient had an abdominopelvic tomodensitometry. In conclusion hydrometrocolpos was diagnosed in 11 patients, and urethral prolapse in five, while uterine prolapse was found in a newborn.

### ***3.5 Therapeutic aspects***

Hymenotomy was performed in nine patients. It was associated with aspiration of intrauterine fluid. Five patients underwent resection of the urethral mucosa and. For genital prolapse in our patients, after failure of conservative management suture of the labia majora was done. Five patients received blood transfusion before surgery.

### ***3.6 Evolutionary aspects***

The outcome was favorable in 16 patients. One case of death from septic shock had occurred following a pyocolpos due to *Escherichia coli*.

## **4. DISCUSSION**

### ***4.1 Epidemiological aspects***

Gynecological emergencies in children are not frequently described in the literature [1]. In our context Hydrometrocolpos was the most frequent clinical presentation, followed by urethral prolapse. Hydrocolpos and hydrometrocolpos have been described with an overall incidence of about 1 in 16,000 live births [1-4]. In our context as a border area in a developing country it would be extremely difficult to determine the exact frequency of this pathology.

Urethral prolapse is more often secondary to a hormonal disorder leading to detachment of the urethral mucosa. It is more frequently found at the extreme ages of life (children and elderly subjects) with certain favoring factors such as abdominal hyper pressure [5-9]. Uterine prolapse is an exceptional entity in the newborn and has the particularity of integrating into a malformation context – especially that of the spine – contrary to our context where no malformations have been found [10]. In our context it was the first in the last ten years of practice.

### ***4.2 Clinical aspects***

Hydrometrocolpos is a pathology secondary to vaginal obstruction, the diagnosis of which is nowadays possible by means of prenatal ultrasound and prenatal MRI from the 25th week of amenorrhea [2]. Hydrometrocolpos is an abnormality due to the retention of cervico-vaginal secretions [1]. It represents a complication of hydrocolpos that occurs in case of imperforated hymen. There is no genetic factor known for the development of imperforated hymen which is caused by the failure of the vaginal plate to completely canalize [3]. This typically occurs by the 8th week of gestation. Incomplete canalization can lead to hydrocolpos or hydrometrocolpos during infancy and childhood [1, 3]. During adolescence it may lead to hematocolpos or hematometrocolpos as seen in our study [1-4]. The mucinous fluid that accumulates is secreted by vaginal and cervical glands. At puberty, imperforated hymen usually causes primary amenorrhea, cyclic abdominal pain, and hematocolpos [3,4]. The infant with imperforated hymen may present abdominal mass, obstructive uropathy, and hydrocolpos. In cases presenting in infancy the hymen appears pink and bulging. Typically, the fluid collection in the vagina is sterile. Elective drainage and hymenotomy are indicated to prevent the complications of infection, urinary retention, and respiratory compromise. The fluid

collection may become infected by the hematogenous route as seen in some of the patients in our study. If this occurs, urgent drainage is required. An early discovery in the prenatal period allows an early therapeutic strategy to be put in place. The clinical picture of post-natal hydrometrocolpos is most often made up of pain and an abdominopelvic mass in children [1-4]. This clinical presentation remains consistent with our context where pelvic or abdominopelvic pain was found in all patients. In this well-defined context, pain can be a consequence of either vaginal and or uterine distension or compression of the neighboring organs by a hyper-distended uterus [1, 2]. This clinical form was found in two of our patients who showed compressive ureterohydronephrosis. In other cases, the diagnosis of hydrometrocolpos is made against the background of painful abdominal-pelvic mass on palpation. Perineal examination shows hymenal imperforation and bulging of the hymen. In certain circumstances a secondary infection can be observed, making a table of pyocolpos with the risk of sepsis. Ultrasound and tomodensitometry are of great help as they will provide diagnostic and impact of the mass on the neighboring organs [2-4].

The clinical presentation of urethral prolapse is unanimous in almost all authors. The latter consists of vulvar swelling, genital hemorrhage and dysuria or even acute retention of urine [5-9]. These data remain consistent with our cases where all our patients have been admitted in a context of genital hemorrhage. Although very rare, chances of vulvar swelling remain possible [5-7]. This swelling is circular when the prolapse is complete.

Described for the first time in 1917 by Findley, uterine prolapse is an extremely rare pathology in the newborn. Ultimately, genital prolapse is not simply a dysmorphic perineal pathology, but above all the local manifestation of congenital systemic abnormality it damages the perineal musculature [15]. Its diagnosis can be made during the prenatal period or at birth by revealing a mass externalized to the vulva either spontaneously or during efforts. This perineal mass corresponding to the uterus will be recognized by the presence of the cervix [15].

#### ***4.3 Paraclinical aspects***

In most cases, the diagnosis of gynecological emergencies could be made through a well-conducted clinical examination. In the context of Hydrometrocolpos outside an infectious context, the biological assessment does not really participate in the diagnosis of the pathology but rather in the appreciation of its impact. Hyperleukocytosis and CRP positive in 7 of our patients are explained by the installation of a probable hydrometrocolpos infection. Anemia observed in our patients could be due to inflammation in this context of secondary infection and late discovery or hemorrhage. Abdominopelvic ultrasound can be very useful in the diagnosis of hydrometrocolpos, especially when it is secondary to vaginal atresia or a transverse septum. It will also allow the search for associated malformations and the appreciation of a repercussion on the neighboring organs as it allowed in our context to highlight two cases of hydrometrocolpos. If in doubt, an abdominopelvic CT scan will be more precise, as was the case with one of our patients.

#### ***4.4 Therapeutic aspects***

Cruciform hymenotomy which has been adopted in all our patients, seems to be the ideal surgical technique for hydrometrocolpos following hymenal imperforation [1,4]. Urethral prolapse complicated by either genital hemorrhage or severe urinary disorders (dysuria or acute retention of urine) will be the subject of surgical management which involves two techniques [5-9]. Doria's technique, which consists of ligating the prolapse around a Foley catheter, is no longer relevant because it exposes complications (pain infections, and especially recurrence) [5]. The complete and circumferential surgical excision of the prolapsed mucosa after placement of a urinary catheter is the most used attitude with better results in the short,

medium and long term [7-9]. Surgical removal of the mucosa gives good results, as observed in our case and with several authors [5-9].

The management of uterine prolapse includes several levels that must be well-codified [10-17]. The first step consists of a simple reduction of the prolapse on the finger with a success rate of around 90% of cases [16]. In the event of failure with a simple reduction, the placement of an intra vaginal Foley catheter or by a pessary wick is an alternative proposed by certain authors with good results [10-14]. Suturing the labia majora is a surgical method that can be used in case of reduction failure, then resection of the cervix and colposuspension are historical methods the use of which is much discussed [11, 12]. In our case we opted for suturing the labia majora because it remains the least invasive among other surgical techniques [11].

#### ***4.5 Evolutionary aspects***

Hydrometrocolpos is a rare pathology in children, but despite its rarity, it has a good prognosis when treatment is done early and in the absence of complications, especially infectious ones [1-4]. Infection of the uterine and vaginal contents can provide a sepsis context that can engage the vital prognosis as in one of our patients. Regarding the prognosis in relation to the subsequent fertility of the patients, many questions remain unanswered in the absence of specific studies in this area.

#### **5. Conclusion**

Gynecological emergencies in children are pathologies. Mostly malformative, it requires early diagnosis and well-adapted care given the pediatric context. Their short- and medium-term prognosis is often favorable. However, a much larger study on the fate of children with hydrometrocolpos after the age of puberty would have made it possible to have a better appreciation of their prognosis.

#### **6. CONFLICT OF INTEREST**

The authors do not point out any conflict of interest regarding this article.

#### **REFERENCES**

1. Sidatta M, Ould Sidi Mohamed Wediha A, Ould Boubaccarb A, et al. (2013) Hydrocolpos and Hydrometrocolpos of the newborn. Archives of Pediatrics 20(2): 176-180.
2. Musarrat Hasan, Erum Saba (2010) Prenatal ultrasonographic diagnosis of hydrometrocolpos. Journal of Medical Ultrasound 18 (2): 81-84
3. El Messidi, NA Fleming (2006) Congenital Imperforate Hymen and Its Life-threatening consequences in the Neonatal period. Journal of Pediatric & Adolescent Gynecology 19(2): 99-103.
4. Shaked O, Tepper R, Klein Z, et al. (2008) Hydrometrocolpos diagnostic and therapeutic dilemmas Journal of Pediatric & Adolescent Gynecology 21(6): 317-321
5. Diouf C, Diallo I, Mbaye F, et al. (2016) The Urethral Prolapse, a Rare Cause of Genital Bleeding in Girls: Report on Three Cases. Medical & Surgical Urology 5(2): 162.
6. Sanda GO, Soumana A, Oumarou H (2012) The urethral mucosal prolapse in young girls: a series of 22 cases and a literature review African Journal of Urology 18(2): 93-96.
7. Ballouhey Q, Abbo O, Sanson S, et al. (2013) Urogenital bleeding revealing urethral prolapse in a prepubertal girl. Obstetrics & Fertility Gynecology 41 (2013) 404-406.

8. Holbrook C, Misra D (2012) Surgical management of urethral prolapse in girls: 13 years' experience .British Journal of Urology International 110 (1): 132-134.
9. Fiogbe MA, Hounnou GH, Koura A, et al. (2011) Urethral mucosal prolapse in young girls: A report of nine cases in Cotonou. African Journal of Pediatric Surgery 8(1): 12-14.
10. L McGlone, S Patole (2004) Neonatal genital prolapse Journal of Paediatrics and Child Health 40: 156–157.
11. Zhiri H, Fatih B, Harou K, et al. (2016) Neonatal genital prolapse: an exceptional entity (about a case). The Pan African Medical Journal 2016 14(25): 153.
12. Saha DK, KM Hasan, SM Rahman, et al. (2014) Neonatal uterine prolapse - case report. Mymensingh Medical Journal 2014 April; 23 (2): 401-5.
13. Adekanmbi AF, Ogunlesi TA, Fetuga MB (2014) Rectal and genital prolapse in Nigerian newborns: case reports and review of the literature. Nigerian Journal of Clinical Practice 17 (1): 119-21.
14. Cheng PJ, Shaw SW, Cheuh H. Y, et al. (2005) Prenatal diagnosis of fetal genital prolapse. Ultrasound in obstetrics & Gynecology 26(2): 204–206.
15. Pirgon O, Atabek ME, Suleymanoglu S (2009) Genital prolapse in a newborn following resection of sacrococcygeal teratoma. Journal of Pediatric and Adolescent Gynecology 22 (5): e96-98.
16. Jijo ZW, Betele TM, Ali AS (2018) Congenital Uterovaginal Prolapse in a Newborn. Case Reports in Obstetrics and Gynecology.
17. Abdelsalam SE, Desouki NM, Abd NA (2006) Use of Foley catheter for management of neonatal genital prolapse: Case report and review of the literature. Journal of Pediatric Surgery 41(2): 449–445.