

Research Article

Management of Chronic Scrotal Swelling at the Urology Department of de la Paix Hospital of Ziguinchor

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Abstract

Introduction: Chronic scrotal swelling is a common reason for consultation at Urology. Its global prevalence remains unknown. Among adults, it is often perceived as a shameful condition. Traditional treatments expose patients to potentially severe complications. This study aimed to assess the management of chronic scrotal swelling within our department. **Methods:** We conducted a four-year retrospective descriptive study (January 1, 2017–December 31, 2020). All patients who underwent surgery for chronic scrotal swelling at the Urology Department of De la Paix Hospital of Ziguinchor, were included. Data were collected from medical records. Variables studied included epidemiological, clinical, etiological, therapeutic, and evolutionary parameters. **Results:** A total of 67 patients were recorded (frequency: 23.3%). The mean age was 54.3 years for adults (range: 20–89 years) and 4.8 years for children (range: 7 months–12 years). Farmers were the most represented group (34.5%). A history of inguinal hernia repair was noted in 12.1%. Scrotal swelling was the main reason for consultation (83%). The right side was affected in 43%. The mean duration of symptoms was 5 years. Inguino-scrotal hernia was the most common etiology (53.4%), while a persistent peritoneo-vaginal duct (PPVD) was the sole cause in children. Bassini technique was used in 27.6% of cases of hernia. In-hospital follow up was performed for 24 hours in 63.8% of adults and 77.7% of children. At 3-month follow-up, outcomes were unremarkable in 96.5%. Complications occurred only on adults including operative wound infection, chronic pain with testicular hypotrophy, and one death. **Conclusion:** Chronic scrotal swelling can occur at any age and remains a frequent condition in urology. Diagnosis is primarily clinical, and surgery is essential but can lead to potential complications.

Keywords

Chronic Scrotal Swelling, Surgery, Scrotal Hernia, Hydrocele

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1. Introduction

Chronic large scrotum is a frequent reason for consultation in urology. Its exact global prevalence is unknown. Cultural decency and the absence of life-threatening prognosis often contribute to chronicity [1]. Management poses diagnostic and therapeutic challenges, and traditional treatments (such as fumigation) may lead to severe complications, including gangrene [2]. This study aimed to evaluate the management of chronic large scrotums in the Urology Department of De la Paix Hospital of Ziguinchor.

2. Patients and Methods

We conducted a retrospective and descriptive study over a four-year period (January 1, 2017, to December 31, 2020). It included all patients who underwent surgery for chronic large scrotum (congenital or acquired) in the urology department of the Hôpital de la Paix in Ziguinchor. Data was collected from patient records.

The variables studied were:

Epidemiological: frequency, age, and occupation;

Clinical: medical and surgical history, reasons for consultation, progression, clinical signs, and morphological examinations.

Etiological: etiological factors.

Therapeutic and evolving: type of surgical procedure, type of anesthesia, postoperative outcomes, length of hospital stay, postoperative complications.

3. Results

We recorded 67 patients who underwent surgery for chronic large bursitis, of whom 86.6% (n: 58) were adults and 13.4% (n: 9) were children. The frequency was 23.3% among the urological conditions monitored in the department. The average age of adults was 54.3 ± 17.7 years [20 and 89 years] (Table 1), compared to 4.8 ± 4.3 years [7 months and 12 years] in children. The majority of our patients were farmers (34.5% [n: 20]), and a history of inguinal hernia repair was reported in 12.1% (n: 7) (Table 1). One case of prematurity at 34 weeks was reported.

Table 1. Distribution of Sociodemographic Data Among Adults.

Sociodemographic Data	Effective	Percentage (%)
Age range		
[20-40]	8	16,6
[40-60]	15	31,3
≥ 60	25	52,1
Occupation		
Farmers	20	34,5
Traders	7	12,1
Laborers	6	10,3
Teachers	5	8,6
Pupils/Students	3	5,2
Medical History		
Inguinal hernia Repair	7	12,1
Pulmonary Tuberculosis	3	5,2
Scrotol Trauma	1	1,7
Varicocele Repair	1	1,7

Scrotal swelling was the main reason for consultation (83%). In adults, the right side was most commonly affected (43%) (Figure 1), while children more frequently presented left-sided pattern (66.7%). Among children, chronic scrotal swelling was

associated with umbilical hernia in 22.2%. Average symptom duration was 5 years (4 months–20 years). Use of traditional remedies (steam or herbal infusions) was noted in 20.7%. Prostate tumors were associated in 19% of adult cases.

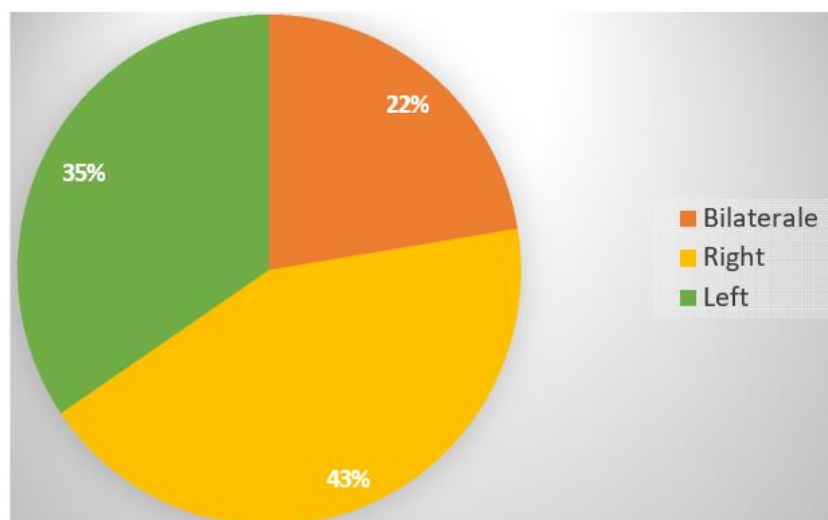


Figure 1. Distribution According to the Grade Achieved in Adults.

Scrotal ultrasound was performed in 43.1% of patients and helped identify the etiology. The most frequent diagnoses were simple inguino-scrotal hernia 53.4% (n: 31), followed by hydrocele 32.7% (n: 19); PPVD was the exclusive cause among children (Table 2).

Table 2. Distribution According to Etiological Diagnosis and Surgical Procedures.

Etiological diagnoses and surgical procedures	Number	Percentage (%)
Etiological diagnoses		
Inguino scrotal hernia	31	53,4
Vaginal Hydrocele	19	32,7
PPVD	9	15,5
Cord Cyst	7	12,1
Grade 3 Varicocele	1	1,7
Testicular Tumor	1	1,7
Procedure		
Hydrocele Repair	19	32,7
Bassini Repair	16	27,6
Prosthetic Hernia Repair	15	25,8
PPDV Repair	9	15,5
Cystectomy	7	12,1
Bilaterale Orchiectomy	1	1,7
Varicocele Repair	1	1,7

general anesthesia with orotracheal intubation was performed in 55.6% of children. Procedures included hydrocele repair using the Bergmann technique 32.7% (n=19), Bassini hernia repair 27.6% (n=16), and ligation-section of the PPVD in all children (Table 2).

A 24-hour observation period was routine for 63.8% of adults, with an average hospital stay of 2 days [1 to 8 days]. The 24-hour observation period was 77.7% for children. In adults, immediate postoperative outcomes were uncomplicated in 98.3% of cases and remained favorable after 3 months in 96.5% (n: 55); however, one case of wound infection and chronic inguinal pain associated with testicular hypotrophy was observed. A 78-year-old patient with heart disease who was being monitored died at home from unknown causes on day 23 of treatment for a hernia associated with a prostate adenomectomy. After a 3-month follow-up, no complications were noted in children.

4. Discussion

In our study, chronic large swelling was the most common urological pathology. This frequency may be underestimated, as many patients delay consultation due to decency. Adults and infants were in the majority in our series. In the study of M Kafka and al, on hydrocele, the average age of patients was 43 years [3]. In the pediatric series by G Ngom and al, the age group from 29 days to 30 months was the most represented [4]. Medical and surgical histories were noted in our patients (hernia repair, prematurity, etc.). Recurrence is a complication of hernia repair and can also lead to certain types of large scrotums (hydrocele) [5].

The most common reason for consultation in adults was scrotal or inguinal-scrotal swelling. M Kafka and al, reported a painful episode in 17.9% of cases [3]. Scrotal swelling generally only prompt consultation in cases of significant

Spinal anesthesia was used in 94.8% of adults, whereas

functional discomfort (difficulty with sexual intercourse or urination) or infertility in the couple. In children, congenital scrotal swelling was the reason for consultation. A Sarr and al, in their study on PCPV pathologies, reported 72.3% inguinal swelling and 27.7% inguinal-scrotal swelling. In our series, the right side was most often affected in adults [6]. MN Guena and al, found equal involvement of both sides 42.5% [7]. Left-sided involvement was common in children. Right-sided involvement was predominant in children in the series by M Ndiaye and al; and G Ngom and al, in 56% and 63.2% of cases, respectively [4, 8].

In our series, the etiologies of chronic scrotal swelling in adults were dominated by inguinal-scrotal hernia (ISH). K Ouattara and al, found ISH to be the primary etiology in 20.9% of cases [9]. These are most often pathologies affecting the elderly [10]. The large number of farmers and prostate tumors were also risk factors observed in our patients. Vaginal hydrocele came in second place. It is the third leading cause of scrotal swelling in Africa, accounting for 17.8% of cases [11]. Studies conducted in Senegal and Congo reported frequencies of 10% and 4.4%, respectively [10, 12]. These data reflect the quasi-endemic nature of the disease in tropical countries. PPDV was the etiology in all children in our series. This can be explained by the high frequency of this congenital pathology, which has been widely reported in previous studies [4, 8].

Surgical management was performed in all patients. A recent systematic review on the management of inguinoscrotal hernias recommends the adoption of a new classification for comparing indications based on size and stipulates an approach based on available local resources and the surgeon's skills [13]. The average hospital stay for our patients was 2 days, and the postoperative course was marked by some complications (hemorrhage from the surgical site, wound suppuration), which were controlled by antibiotic therapy and local care. In a systematic review of hydrocele treatment, postoperative complications, costs, and recovery time were lower in the aspiration-sclerotherapy group; however, the recurrence rate was higher. Short-term healing was no different between surgery and sclerotherapy, with heterogeneity in the data [14]. M Coulibaly and al, also reported wound infection as a postoperative complication [2]. M Kafka and al, described per- or postoperative complications in 5 out of 156 patients [3]. In a series of over 1,775 Lichtenstein procedures for ISH, early postoperative complications were 5.3% and mortality was zero; chronic pain was noted at rest (2.2%) and during exertion (4.4%) [15]. These complications could be related to surgery or poor local care, sometimes prolonging the stay and increasing the cost of care.

5. Conclusion

Chronic scrotal swelling can occur at any age and may be congenital or acquired. It is a frequent urological condition. In adults, embarrassment often leads to delayed consultation.

Diagnosis is mainly clinical, and surgery remains the cornerstone of management, though it carries a risk of complications.

Abbreviations

ISH	Inguinoscrotal Hernia
PPVD	Persistent Peritoneo-vaginal Duct

Conflicts of Interest

The authors declare no conflicts of interest.

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