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Testicular Migration Anomalies in Children AT GABRIEL TOURE CHU: About 52 Cases

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Abstract **Original Research Article**

***Introduction*:** Testicular migration anomaly (TMA) is the most common malformative syndromic entity of the genital organs in male children. It affects 2 to 5% of full-term children and 30% of premature babies as well as newborns with low birth weight (≤ 2500 g). We carried out this work with the objectives of studying the clinical and therapeutic aspect of testicular migration abnormalities. ***Patients and Method*:** A retrospective study of a series of 52 cases carried out in the pediatric surgery department at CHU Gabriel Touré over a period of 5 years from January 1, 2015 to December 31, 2019. All male patients aged 0 to 15 are included. having an isolated or associated congenital undescended testicle. ***Results*:** This is a series of 52 patients, an incidence of 10.4 cases per year. The average age was 3.15 years with a range of 0 to 14 years. Scrotal emptiness was the reason for consultation in 44.2% of cases. Abdominal pain was found in 9.6% of patients. Scrotal vacuity was bilateral in 59.6% of cases. Bilateral undescended testicles were an element of a poly malformation syndrome in 30.8%. A urethral meatus in a posterior position was found in 5.7% of cases. The mass was palpable on the right in 17.3% of cases. The masses were palpable bilaterally in 17.3% of cases. The mass was palpable on the left in 11.5% of cases. An inguinoscrotal ultrasound was performed in 50% of patients. The operated patients were 67.3% of cases. The inguinal approach was performed in 74.2% of patients. A 1-stage orchidopexy was performed in 60% of our patients. Operated patients who had a testicle in the right inguinal region represented 31.4% of cases. Testicular atrophy was found in 40% of patients. The result was favorable 6 months after the intervention in 82.8% of patients. ***Conclusion*:** Testicular migration anomalies present a multitude of clinical pictures depending on whether they are palpable or not, congenital or acquired, isolated or secondary to a malformative pathology, and the unilaterality or bilaterality of the undescended testicle.

Keywords: Migration Anomaly, Testicle, Child, Bamako.

INTRODUCTION

Testicular migration anomaly (TMA) is the most common malformative syndromic entity of the genital organs in male children. It affects 2 to 5% of full-term children and 30% of premature babies as well as newborns with low birth weight (≤ 2500 g) [1-3]. Clinically the testicle is not in scrotal position, this malposition is generally unilateral, but can sometimes be bilateral. Clinical forms can be isolated or associated with other pathologies.

The positive diagnosis of this set of pathologies is primarily clinical, however depending on the etiology, additional examinations may be necessary. AMT can be associated with severe congenital malformations. Treatment is surgical regardless of the type of undescended testicle (TND).

Given the absence of a specific study on testicular migration anomalies in children, we carried out this work with the objectives of studying the clinical and therapeutic aspect of testicular migration anomalies.

PATIENTS AND METHOD

We conducted a retrospective study from January 1, 2015 to December 31, 2019 in all children aged 0 to 15 years treated for testicular migration anomalies in the Pediatric Surgery department of the Gabriel Touré University Hospital.

Anomalies of the urogenital or general sphere without abnormality of testicular position were not included in the study. During the period from January 1, 2015 to December 31, 2019, consultation registers, operating report books and hospitalization files were consulted. The data were entered on MICROSOFT

WORD 2010 and analyzed using SPSS version 25 software.

RESULTS

In 05 years we have collected 52 cases of testicular migration anomalies. An incidence of 10.4 cases per year. The average age was 3.15 years with a range of 0 to 14 years. Scrotal emptiness was the reason for consultation in 44.2% of cases. Abdominal pain was found in 9.6% of patients. Scrotal vacuity was bilateral in 59.6% of cases. Bilateral undescended testicles were an element of a poly malformation syndrome in 30.8%. A urethral meatus in a posterior position was found in 5.7% of cases. The mass was palpable on the right in 17.3% of cases. The masses were palpable bilaterally in 17.3% of cases. The mass was palpable on the left in 11.5% of cases. An inguinoscrotal ultrasound was performed in 50% of patients. The operated patients were 67.3% of cases. The inguinal approach was performed in 74.2% of patients. A 1-stage orchidopexy was performed in 60% of our patients. Operated patients who had a testicle in the right inguinal region represented 31.4% of cases. Testicular atrophy was found in 40% of patients. The result was favorable 6 months after the intervention in 82.8% of patients.

DISCUSSION

In our study, we identified 52 cases of testicular position anomalies, over a period of 5 years; i.e. an incidence of 10.4 cases/year. In Burkina Faso, Sano and his colleagues (1999) [4], calculated a prevalence of 1.2% on a total of 7334 children attending schools over a period of 4 months (cross-sectional study). In Cameroon, Tambo and colleagues (2017) [5], found an incidence of 8.8 cases/year, over a period of 8 years. And finally in the DRC, Alumeti and colleagues (2017) [6], concluded at a prevalence of 1.5%, on a total of 5066 children.

The average age was 3.15 years in our study. Thus in Ouidani's study in 2018 [7], we find an average age of 3.8 years; and in that of Tambo and his collaborators in 2017 [5], an average age of 5.8 years.

The main reason for consultation was the emptiness of the bursae in our study and constituted 44.2% of all the reasons for consultation for an isolated TND. It is the same for other studies, where that of Dembélé (2010) [8], it constitutes 90.5% of all its reasons for consultation.

Inguinoscrotal hernias and hydroceles were found in 9.6% of cases, all operated on in our study. In other studies, malformations such as persistence of the peritoneo-vaginal canal constitute a large association in the appearance of TND (83.3% in the study by Alumeti and colleagues; 11.7% in the study by Sano, 15.7% for Dembélé; 11.4% and 16.6% in the studies of Ouidani and El Kheloufi [9], respectively). In addition, hypospadias is strongly included in the majority of studies (5.8%; 2.6%; 3.7%; and 7.1%), as a pathology associated with TND. In our study, they are bilateral (1.9%) or unilateral (3.8%) cryptorchidism.

In our study, 19.2% of cases felt pain mainly in the abdominal area. In the study by Diakité (2005) [10]. 11.6% of cases felt pain mainly in the scrotal location. And in the study by Dembélé (2010) 9.5% of cases felt pain mainly in the abdominal area.

The mass was palpable at the inguinal level in 46.1% of patients in our study and therefore a palpable testicle. The study by Diakité (2005) [10], found approximately the same rates.

The contribution of inguino-scrotal and/or abdominopelvic ultrasound made it possible to locate the testicle, to estimate their appearance and their dimension in our study; as well as in the work of Diakité (2005) [10], and Dembélé (2010) [8]. Imaging highlighted an importance in non-palpable TND in the study by Ouidani (2018) [7], and the contribution of abdominopelvic CT (5.5%) in the study by El Kheloufi [9].

In our study, due to the surgical management of associated pathologies concomitantly with the management of different types of TND; there appears a difference in surgical practice associations between our study and those observed. And the approach was 74.2% inguinal. The scrotal route was not performed. Regarding the operating techniques specific to TND, 1-stage ochidopexy was the majority, and 1.9% benefited from a 2-stage orchidopexy of the Stepen Fowler type. It should be noted that in the study by Alumeti and his colleagues (2017) [6], hormonal treatment was instituted in 9.2% (n=7) of patients at a rate of 500IU/once/week in intra muscular, for 4 weeks (Pregnyl*) then were operated. Conversely, no hormonal therapy was instituted in our patients.

Testicular atrophy was found in 40% of patients in our study. In the study by Alumeti [6], 42% of patients had atrophy, and in that of Ouidani [7]. 28.1% atrophy was found. In the other studies, when an orchiectomy was performed, the reasons were not specified.

In our study, 100% of cases evolved favorably in the immediate postoperative period. In the study of Alumeti [6], and that of Dembélé [8], we find approximately the same result.

CONCLUSION

Testicular migration anomalies present a multitude of clinical pictures depending on whether they are palpable or not, congenital or acquired, isolated or secondary to a malformative pathology, and the unilaterality or bilaterality of the undescended testicle.

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