



DISTAL HYPOSPADIAS IN CHILDREN TREATMENT AND COMPLICATION: about 284 cases

D. TRAORE*, M. QOREICHI, ML. TOURE, K. FOURAJI, EE. KAMILI, M. OULAD SAIAD

General Pediatric Surgery Division, Mohamed VI Teaching Hospital, Marrakech

ABSTRACT

Introduction: Hypospadias is the most common genital malformation. Its prevalence is estimated at 3-8 cases per 1,000 male births. Its management is surgical. Complications are the most important challenge despite the progress of surgical techniques. **Methods:** A retrospective study on 284 cases, during the period of 6 years from 2009 to 2016, to identify the epidemiological and clinical aspects and the management of distal hypospadias. The surgical techniques used were Duplay, Duplau-SnodGrass(TIP), Mathieu, and Koff. The minimum follow-up was 6 months. Through this study and a literature review, we will try to describe the particular clinical entity and take stock of the complications related to the different treatments

Keywords: Distal hypospadias- Children- Treatment- complication

INTRODUCTION

Hypospadias is the most common genital malformation after cryptorchidism. Its prevalence is estimated at 3-8 cases per 1,000 male births. Its management is surgical. Complications are the most important challenge despite the progress of surgical techniques.

MATERIAL AND METHODS

A retrospective study was performed during the period of 6 years from 2009 to 2016, to identify the epidemiological and clinical aspects and the management of distal hypospadias. The surgical techniques used were Duplay, Duplau-SnodGrass(TIP), Mathieu, and Koff. The minimum follow-up was 6 months. We had simple and univariate data, processed by SPSS.

RESULT AND DISCUSSION

We collected 284 cases of anterior hypospadias over 6 years, they represented 3.21% of hospitalizations. The average age of our patients was 3 and a half years with extremes of 4 months and 13 years. 62% of our patients reside outside the city of Marrakech, the firstborn of the siblings accounted for 35% of patients. The blood relationship between parents was noted in 18% of cases and a history of hypospadias in the family were 14% of cases. Balano coronarius hypospadias

accounted for 167 cases or 58.8%, followed by anterior penile with 61 cases or 21.5%; 56 cases of glandular hypospadias a rate of 19.7%. 53 of our patients 18.7% were already circumcised before surgery elsewhere (fig1). Cryptorchidism and inguinal hernia were associated anomalies most represented with 22 cases and 5 cases, 1 case of urethral duplicity associated. The technique of Duplay-Snodgrass (TIP) was the most practiced in 70% of cases without Duplay TIP in 38 cases or 13.4%, the simple meatoplasty performed in 21 cases, the technique of Mathieu used in 19 patients or 6.7%, the snod Graft achieved in 5 cases and 3 patients according to Koff . The good functional and aesthetic result was achieved in 263 patients was 92.6%. Among the 198 patients operated with the Duplay-technical Snodgrass we found 8 cases of fistula, 4 cases of stenosis, 2 cases of skin necrosis, 1 case of desertion and 1 case of burying the glans. With 38 patients benefit of cure according Duplay without TIP, we found 2 cases of fistula and 1 dropping. 1 fistula cases among the 19 cases of Mathieu technique, no complications were recorded with snod Graft and the koff (Board). The duration of the bladder catheter was 48 hours in 63% of cases. 15% of cases were operated in day hospital (hdj) and the average duration of hospitalization was 4.5 day with extremed ranging from one day to seven day.

Discussion

Hypospadias in its earlier forms (balanic, balanopreputial anterior penile) is one of the most common boy's deformities. Surgical techniques vary from team to team but all authors are now unanimous in processing time alone [1-2] . Taking account of the anatomy of the navicular fossa and urethral plate is important to optimize the result of the surgery. A dimple filled navicular and a narrow urethral plate lead to a significant complication rate. [3] In our study, the difference between the incidence of complications (fistulas, meatal stenosis, dehiscence) between technical Duplay-Snodgrass and Mathieu statistically significant with ($p < 0.05$). Yet among the many surgical techniques, that of Duplay-Snodgras appears to have two advantages: the urethral plate is not dissected, it is richly vascularized and urethroplasty offers less risk of fistula, second meatus after landfill urethra rebuilt in the acorn, gives a longitudinal slot appearance quite physiological [4, 5]. In literature as our series, it was the most used technique with 92% of good results. Complications with fistula are explained by surperposition sutures, anatomy state of the urethral plate [6,7].

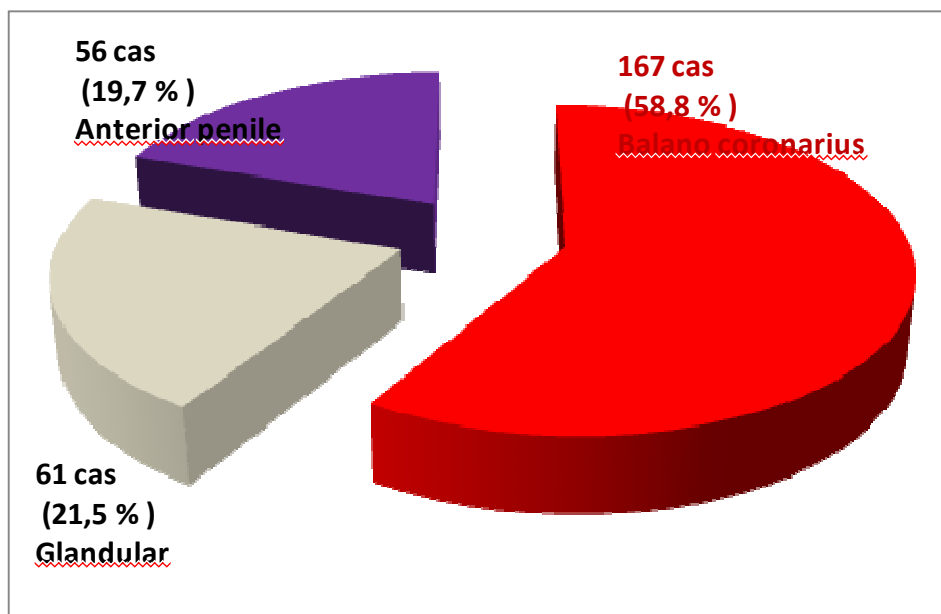


Fig. 1 : distribution by location

Board: Post operative complication by surgical techniques

Techniques opératoires	Post surgical complications						Total
	Goog result	Urethral fistula	Stenosis	Suture dehiscence	Skin necrosis	Burying the glans	
Duplay	34	2	0	1	0	1	38
Duplay-SnodGrass	182	8	4	1	2	1	198
Snod Graft	5	0	0	0	0	0	5
Mathieu	18	1	0	0	0	0	19
Koff	3	0	0	0	0	0	3
Méatoplastie	21	0	0	0	0	0	21
Total	263	11	4	2	2	2	284

CONCLUSION

According to the surgical technique, no difference was reported in the occurrence of postoperative complications. The best technique is, without doubt, the most mastered by the surgeon.

REFERENCES

- [1] Barthold JS, Teer TL, Redman JF. Modified Barcat balanic groove technique for hypospadias repair: experience with 295 cases. *J Urol* **1996**; 155: 1735-7.
- [2] Park J, Faeberg G, Bloom D, Long-term outcome evaluation of patients undergoing the meatal advancement and glanduloplastie procedure. *J Urol* **1995**; 13: 1655-6.
- [3] A.A Mosharafa, D. Agbo-Panzo, R. Priso, E. Aubry, R.Besson. Hypospadias repair: The effect of urethral plate configuration on the outcome of Duplay-Snodgrass repair. *J. purol.* **2009**; 19: 507-511.
- [4] A. Bouhafs, J.L. Mege, R.Dubois, P. Chaffange, H. Dodat. Modified Duplay technique in the treatment of hypospadias : 585 cases. *Ann Urol* **2002**; 36: 196-203.
- [5] N.C. Bush, T.D. Barber, D. Dajusta, J.C. Prieto, A. Ziada, W. Snodgrass. Results of distal hypospadias repair after pediatric urology fellowship training: a comparison of junior surgeons to their mentor. *J.purol* **2015**; 10: 1016
- [6] Rompre M-PD, Nadeau G, Moore K, Ajjaouij Y, Braga LH, Boldue S, Learning curve for TIP urethroplasty: a single-surgeon experience, *Can Urol Assoc J* **2013**, epub.
- [7] Snodgrass WT, Bush N, Tubularized incised plate hypospadias repair: continued evolution and extended application *J Pediatr Urol* **2011**; 7: 2.