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Female Hypospadias: A Case Report

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Abstract **Case Report**

Female hypospadias is a rare congenital malformation, often underdiagnosed compared to its male counterpart. We present the case of a 4-year-old girl with a history of poorly managed heart disease, diagnosed at the age of 2 after several episodes of recurrent urinary tract infections. Abdominopelvic ultrasound revealed bilateral pyonephrosis and bilateral uretero-hydronephrosis (UHN). Clinical examination and additional investigations led to the diagnosis of female hypospadias with a common channel measuring between 1 to 15 cm in length. Treatment involved the apicalization of the urethral meatus and a meatoplasty using Hendren's technique, followed by uncomplicated postoperative recovery. This study highlights the importance of distinguishing female hypospadias from urogenital sinus in females to optimize diagnosis and treatment. The results show that surgical correction is effective, offering good postoperative outcomes.

Keywords: Female hypospadias, meatoplasty, Hendren, vesicostomy.

INTRODUCTION

Hypospadias is a well-known congenital malformation in boys, but it remains a rare and often underdiagnosed condition in girls. Female hypospadias is characterized by partial or complete agenesis of the urethrovaginal septum and may present as urinary incontinence, recurrent urinary tract infections, or meatal stenosis. Unlike male hypospadias, female hypospadias is often diagnosed late, sometimes months or even years after birth, due to a lack of awareness among practitioners and the absence of prominent clinical signs in many cases.

One major source of confusion in managing female hypospadias lies in the interchangeable use of the terms "hypospadias" and "urogenital sinus" in females. Differentiating between these two entities is crucial as it directly impacts treatment options and long-term prognosis. Some authors suggest reserving the term "hypospadias" for very low anomalies of the female urogenital tract, while "urogenital sinus" should be used for higher malformations.

This article presents a rare clinical case of female hypospadias diagnosed in a 4-year-old girl, with a literature review on this condition to better understand its clinical presentation, differential diagnosis, and treatment options. Our aim is to contribute to a clearer understanding and clarification of the terminology and therapeutic approaches used to treat female hypospadias and to highlight the importance of early and accurate diagnosis to improve surgical outcomes and patient quality of life.

CASE REPORT

The patient is a 4-year-old girl with a history of poorly managed heart disease. She first presented at the age of 2 after several episodes of recurrent urinary tract infections. Her clinical history revealed symptoms of preserved micturition despite episodes of urinary incontinence, raising suspicion of a urogenital anomaly. An abdominopelvic ultrasound was performed, revealing bilateral pyonephrosis associated with bilateral uretero-hydronephrosis (UHN). These anomalies were attributed to a potential obstruction or anatomical anomaly of the urogenital tract. A detailed physical examination revealed a non-stenosed hypospadiac urethral meatus with a common channel measuring 1 to 15 cm in length. The diagnosis of female hypospadias was made based on these observations. Due to the failure of an initial attempt at urinary catheterization, a vesicostomy was performed to allow effective bladder drainage and prevent further renal complications. After stabilizing the patient, a surgical intervention was planned to correct the

hypospadias. A meatoplasty using Hendren's technique was performed, utilizing the anterior part of the vagina to recreate a functional and apicalized urethral meatus. (Figure 1)

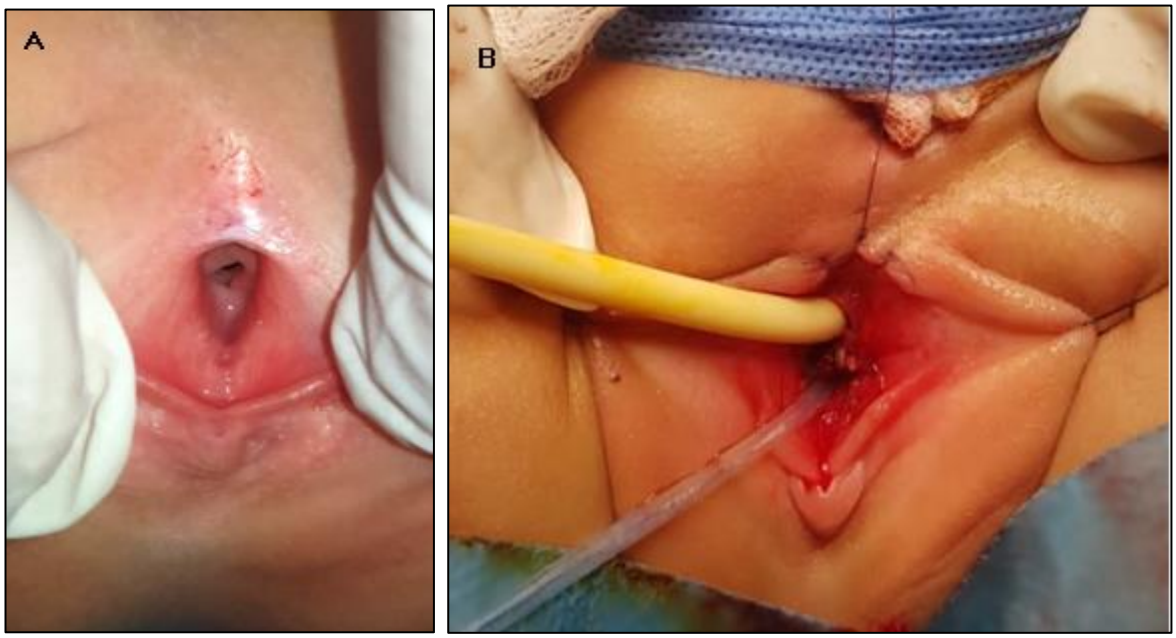

Figure 1: (A) Unseen urethral meatus during first examination. (B) Apicalized urethral meatus after meatoplasty.

RESULTS

The patient tolerated the vesicostomy well, which relieved the initial urinary symptoms and stabilized her renal function. No signs of infection or immediate complications were observed after bladder drainage. A meatoplasty using Hendren's technique was successfully performed, utilizing the anterior part of the vagina to recreate an anatomically correct neo-urethral meatus. The procedure allowed for effective apicalization of the urethral meatus. The postoperative course was straightforward. The patient showed no signs of infection or urethral stenosis in the immediate postoperative period. A vaginoscopy performed one month postoperatively confirmed the integrity of the neo-urethral meatus and the vagina, with no stenosis or signs of secondary complications. The apicalized urethral meatus remained anatomically normal and functional. The patient stopped experiencing episodes of urinary incontinence and reported no new recurrent urinary tract infections after the surgical correction. After surgery, the patient regained normal urinary function with painless micturition and no incontinence. Mid-term follow-ups showed complete urinary continence and the absence of obstructive symptoms or urinary infections. The results indicate that there were no long-term complications associated with the surgical technique used. The neo-urethral meatus remained patent, and no further interventions were required.

DISCUSSION

Female hypospadias is a rare congenital malformation that often presents diagnostic and terminological challenges. The case presented in this study highlights the importance of early diagnosis and appropriate surgical management to optimize clinical outcomes. Our results confirm that the surgical approach using Hendren's meatoplasty, preceded by vesicostomy, is effective for treating cases of female hypospadias with a low meatus [1,2].

A major source of confusion in pediatric urogenital surgery is the interchangeable use of the terms "hypospadias" and "urogenital sinus" in females. As discussed by several authors, these two terms should reflect different levels of agenesis of the urethrovaginal septum. The term "hypospadias" should be reserved for very low anomalies, where the urethral meatus opens in the lower third of the vagina or its vestibule, while "urogenital sinus" should be used for cases where the urethral orifice is located higher, in the upper two-thirds of the vagina. This distinction is not merely semantic; it has significant clinical implications. Indeed, a urethra with a meatus closer to the vestibule is more likely to have a normal caliber, reducing the risk of complications such as urinary infections and hydronephrosis [3].

In the presented case, the diagnosis of female hypospadias was made following recurrent urinary tract infections and bilateral pyonephrosis, underscoring the importance of considering this anomaly in young girls with persistent urinary symptoms. The surgical technique used in our case, Hendren's meatoplasty, corrected the anomaly by recreating a functional urethral meatus. This method, which uses the anterior part of the vagina, offers an anatomically satisfactory solution while minimizing the risk of urethral stenosis.

However, it is important to note some limitations of this study. First, it is a single case report, so the results cannot be generalized to all cases of female hypospadias. Second, the long-term postoperative follow-up of the patient remains limited. Although short- and mid-term results are promising, further studies with a larger sample size and longer follow-up are needed to confirm the efficacy and safety of this surgical approach.

CONCLUSION

Female hypospadias is a rare congenital malformation that requires particular clinical attention due to its often atypical presentation and underdiagnosis. This clinical case emphasizes the importance of a precise differential diagnosis between female hypospadias and urogenital sinus, as well as the need for appropriate surgical management to effectively correct this anomaly. The meatoplasty technique according to Hendren, preceded by vesicostomy to stabilize the patient, proved effective, with satisfactory short- and mid-term results.

Correct use of terminology—distinguishing female hypospadias from urogenital sinus—is crucial for guiding surgical techniques and improving clinical outcomes. A better understanding of these anomalies, supported by further studies with larger patient samples and long-term follow-up, could not only refine treatment strategies but also prevent potential complications associated with late or inadequate management.

In conclusion, this study contributes to clarifying the concepts and therapeutic approaches for female hypospadias, highlighting the need for increased clinician awareness of this rare condition. Continued efforts are necessary to improve early diagnosis, refine surgical techniques, and ensure better quality of life for patients with female hypospadias.

Ethical Considerations:

Informed consent for publication was obtained from the patient's guardians, ensuring compliance with ethical standards.

REFERENCES

1. Chemaou, A., Lasry, F., Nejdioui, Z., Eizmmouri, M., & Sibai, H. (2013). Female hypospadias diagnosed in an adolescent. *Archives de Pediatrie: Organe Officiel de la Societe Francaise de Pediatrie*, *20*(12), 1314-1316.
2. Hendren, W. H. (1998). Construction of a female urethra using the vaginal wall and a buttock flap: experience with 40 cases. *Journal of pediatric surgery*, *33*(2), 180-187.
3. Knight, H. M. L., Phillips, N. J., & Mouriquand, P. D. E. (1995). Female hypospadias: a case report. *Journal of pediatric surgery*, *30*(12), 1738-1740.