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Distal Ureteric Dilatations Functioning as Urinary Reservoir in a Case of Ectopic Vesicae; A Case Report

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Abstract

Background: Bladder exstrophy is a rare congenital malformation of the genitourinary system, with an estimated incidence of approximately 1 per 50,000 live births. Clinically, patients do not have capacity to accumulate urine and urine continously leak. We present patient with partial storing capacity from the dialated distal ureters. A case of dialated distal ureters from an 8-year-old female patient with ectopic vesicae is described. The dialated ureters act as reservoir of urine where the patient is partially continent in the night time. These dialated ureters are the compensation for the literally absent bladder. During reconstruction, we observed that they can be used as an additional bladder volume reducing risk of reconstruction failure from tension

Keywords

Bladder Exstrophy, Ureteric Dilatations

1. Introduction

Ectopic Vesicae is also known as bladder exstrophy. Bladder exstrophy is a rare congenital malformation of the genitourinary system, with an estimated incidence of approximately 1 per 50,000 live births. The exstrophy-epispadias complex represents a severe midline abdominal birth defect that causes wide separation of the pubic symphysis, an abdominal wall defect and an anteriorly positioned open bladder and urethra [1] [2]. Many of the cases do not have any urine reservoir and continuously leak until some form of reconstructive surgery is done to make them store urine and have continence. Our case, however, had partial continence due to dilatation of the distal urethra functioning like urinary bladder. This situation has not been reported so fat to our knowledge and we be-

lieve that this report creates awareness of surgeons dealing with ectopic vesicae.

2. Case Presentation

History

An 8 year old girl presented with bladder extrophy otherwise called classic ectopic vesicae to our clinic in Ibex hospital located in Gondar town, Amhara region, Ethiopia.

She has this condition since birth and has never been surgically repaired. Parents report they have seen doctors several times earlier for possible reconstruction but she was turned down.

As in the case of all bladder extrophy patients, she had been wetting continuously and had never controlled her bladder function. Parents also reported that bladder was opened to the external environment over the abdomen since birth. From age 6 onwards parents were able to notice that she has some reduction in wetting in the night time but not in the day time. This was witnessed by the amount of diaper used; she uses more diapers in the night compared to that of the day. She quitted school due to the discomfort from the smell of urine and complaint of other children.

Physical Examination revealed that malnourished girl with mild physical growth retardation but no features of uremia. Vital signs were all with in normal range. The relevant finding is in the lower abdomen where we noticed complete bladder extrophy, separation of the clitoris and the labia majora. Both ureteric orifices were visible. No feature of bladder mucosal ulceration and changes in the mucosa was observed.

Complete blood count, BUN and creatinine were all with in normal limit. Pelvic radiography showed moderate separation of the symphysis pubis.

After optimization, surgery was performed to reconstruct the urinary bladder. The ureters are catheterized with nasogastric tube of 10 FR size. Upon ureteric catheterization, we found big reservoir of urine in both distal ureters (**Figure 1**). The ureteric catheters however could pass to the kidneys without difficulty. The distal dilatation of the ureters were about 25 - 30 ml. in volume each. It was also evident on Intravenous urography done before reconstruction (**Figure 2**). Patient was optimized to undergo major surgery including bladder closure and genital reconstruction. The procedure went smooth and there was no complication observed during postoperative period, urethral catheter was removed 7 days after the day of surgery

3. Discussion

This situation, dilatation of distal ureters, has been acting as urinary reservoir replacing some of the functions of the bladder to certain extent. The fact that she is less wetter in the night compared to the day can be explained by the fact that the ureteric reservoirs work better in the supine position due to gravity. Bladder closure was done successfully followed by trigone and genital reconstruction

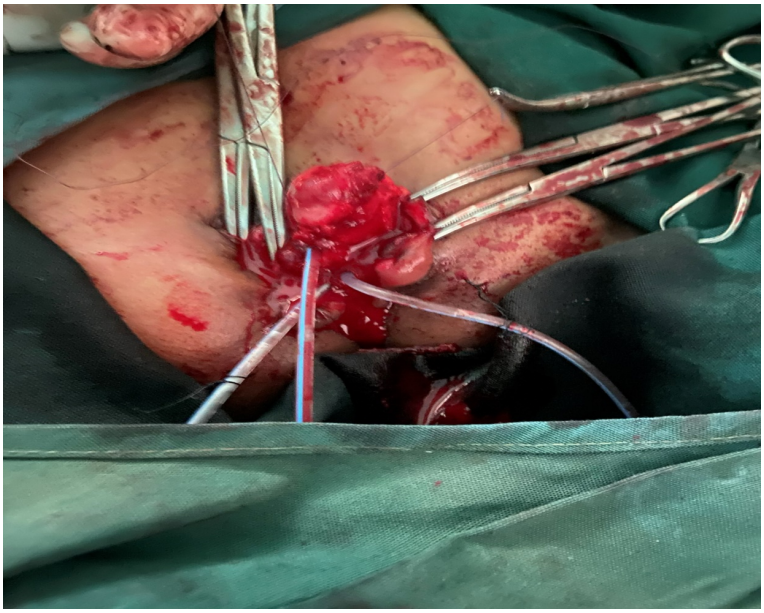

Figure 1. This figure shows introperative finding of the dilated distal ureters as indicated by insertion of 8 Fr infant feeding catheter.

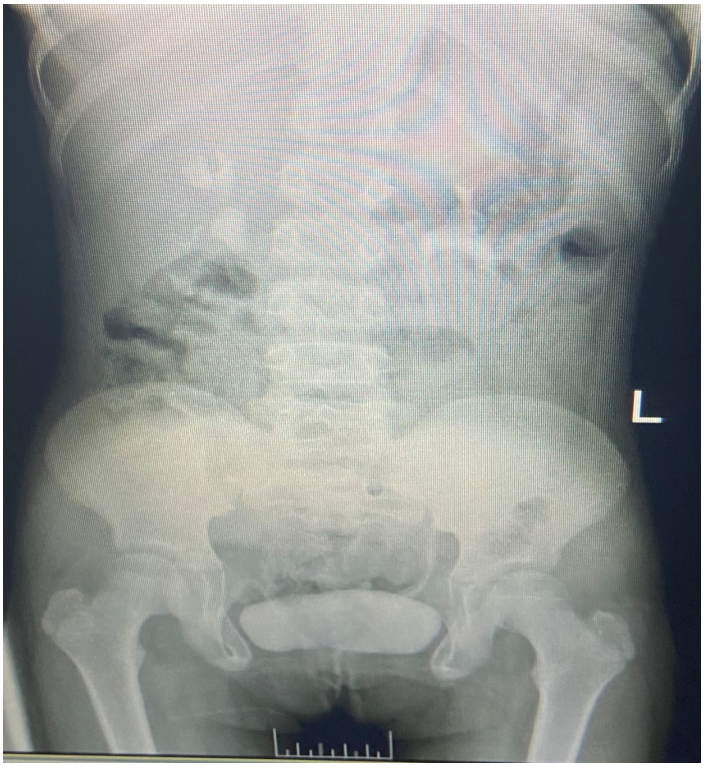

Figure 2. Intravenous Urography: showing the dialated distal ureters containing the Intra venous contrast. Picture was taken weeks before surgical closure of the exstrophied bladder.

within 3 months [3]. Reconstruction did not need a pelvic osteotomy or any complication seen on extra vesical flap development [4]. Follow up reveals she is better off in degree of dryness during day and night compared to those children with no dilatation of distal ureters.

4. Conclusion

This condition has never been reported so far to our knowledge. The dilated distal ureters compensate the reservoir function of the reconstructed bladder. They also prevent tension developing over the suture lines and avoid failure of bladder closure. Though they are now supporting the bladder function as an extra reservoir. In planning the reconstructive surgery, it may be useful to consider these volumes as an important augmentation and avoid extensive dissection to find increased bladder size. The complications that may arise in the future are not yet known and this patient needs close follow up and intervention in case this ureteric abnormality impedes urinary flow and causes upper tract deteriorations [5] [6].

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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