ORIGINAL RESEARCH PAPER

Paediatric Surgery

BILATERAL SINGLE SYSTEM ECTOPIC URETERS (BSSEU) –AN UNKNOWN ENTITY

KEY WORDS: BSSEU, Bladder agenesis

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ABSTRACT

BSSEU - Bilateral Single System Ectopic Ureters.80 % of ectopic ureters are associated with duplicated systems, and 5-17% are bilateral. BSSEU is extremely rare and it is associated with hypoplastic bladder or bladder agenesis. Bladder agenesis has an incidence of 1 in 6 lakh patients. It is generally agreed that suitable urinary continence and long dry intervals are seldom obtainable because of poorly developed trigone and bladder neck area.

INTRODUCTION :

- BSSEU : Bilateral Single System Ectopic Ureters.80 % of ectopic ureters are associated with duplicated systems, and 5-17% are bilateral.[1]
- BSSEU is extremely rare and it is associated with hypoplastic bladder or bladder agenesis
- Bladder agenesis has an incidence of 1 in 6 lakh patients.[2]
- Bilateral Single System Ectopic Ureter (BSSEU) is often associated with underdeveloped incompetent bladder neck; hence, to achieve continence; bladder neck reconstruction (BNR) is usually advocated with ureteric reimplantation.[3]

CASE DESCRIPTION

3 years 6 months old female child presented with history of continuous dribbling of urine since birth.

- **Ultrasonography of KUB** showed Grade 3 hydroureteronephrosis on both sides, bladder hypoplastic.
- **Sonocystometry** showed 3cc bladder volume
- **Voiding Cystourethrogram** : Bilateral Grade V reflux
- **MR Urogram**: Bilateral moderate hydroureteronephrosis, abrupt tapering of bilateral distal ureters and likely inserting into urethra just below the pubic bone , Urinary bladder not visualised suggesting bladder agenesis.

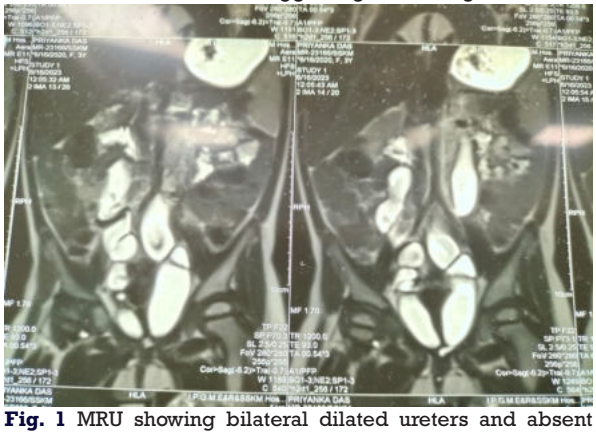

Fig. 1 MRU showing bilateral dilated ureters and absent bladder

DTPA (Radionucleotide scan): Bilateral obstructive curve

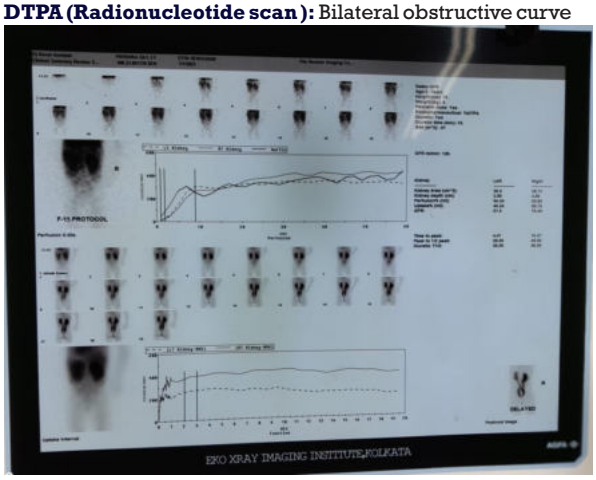

Fig. 2 DTPA SCAN

Diagnostic Cystoscopy: Very small capacity bladder , Ureteric openings not visualised. One aberrant opening found behind bladder neck in posterior urethra.

MANAGEMENT

Planned for **Diagnostic Laparoscopy,** followed by open exploration.

On open exploration, division of bilateral ureters close to bladder neck,followed by **intravesical reimplantation** over 5 Fz infant feeding tube.

Feeding tubes were removed after 15 days.

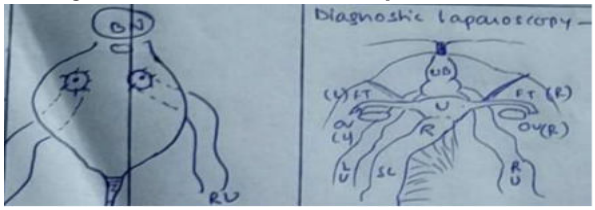

Fig. 3 showing schematic picture of laparoscopic view .

RU : RIGHT URETER,LU- LEFT URETER, UB/BN – BLADDER,FT-FALLOPIAN TUBE,OV- OVARY

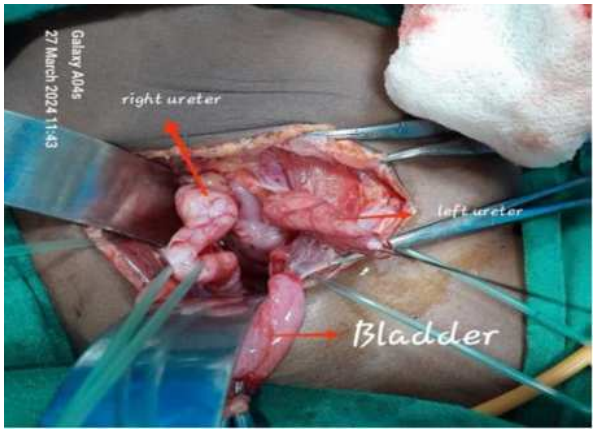

Fig. 4 showing bilateral dilated ureters and small bladder behind the deaver's retractor

FOLLOW UP

- Sonocystometry done 3 months after operation showed urinary bladder optimally distended, echogenic debris noted , wall thickness 3 mm.
- Urine routine and culture reports are normal.
- **Voiding Cystourehrogram,DMSA** and **DTPA** are planned after 6 months of operation.
- The child is having dry interval of 2 hours after 3 months of operation.

CASE DISCUSSION AND CONCLUSION

- BSSEU is a rare congenital anomaly where the ureters open caudal to the trigone in an unduplicated system.
- The ureter can open anywhere from the bladder neck to the perineum or into the vagina, uterus, or rectum.
- As the ureters do not open in the trigone, neither the trigone nor the bladder neck may be properly developed.
- **Sonocystometry** and **Diagnostic Laparoscopy** are very essential in planning management.
- Management of BSSEU is challenging because of small bladder capacity and nonfunctional bladder neck sphincter.
- The aims of management are repositioning of the ureteric opening in the bladder, improving the bladder capacity, and correcting the urinary continence by creating urethral continence mechanism.
- Correction of reflux and preservation of renal function is also important.

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