Abstract:
ABSTRACT BACKGROUND Abnormalities of ureteral development including ectopic ureters and ureteroceles represent a large component of clinical urology. They continue to challenge clinical management, despite their wide recognition and well-defined surgical strategies. The wide spectrum of involvement and the variable patterns of presentation underlie the clinical challenge and require a thorough understanding of both normal and abnormal embryology of the lower urinary tract. The pathogenesis of ureteral ectopia with or without a ureterocele rests in ureterotrigonal and renal development. This involves the common nephric duct, ureteral budding, ureterometanephric interactions, and bladder and trigone development. Ectopic ureters can arise due to abnormal timing or location of the primary ureteral budding from the mesonephric ducts. That temporospatial location will determine both the character of the ureter incorporated into the emerging bladder, as well as the development of the trigone and kidney.

CASE REPORT:
A 19 year old female patient presented with history of continuous urinary leak since birth. Clinical examination showed ectopic ureteric orifice in the left lateral wall of vagina with continuous urinary leak. Apart from routine investigations we did contrast enhanced computerized tomography, retrograde pyelography. Investigations showed complete ureteric duplication with upper moiety ureter opening in to the vagina and lower moiety ureter opening into the bladder normally. Pyeloureterostomy was done through 12 rib tip incision. Upper moiety ureter was anastomosed with lower moiety pelvis. The diagnostic and treatment options and possible mechanisms of development of ectopic ureter are discussed in this article.

Keyword : ectopic ureter, double moiety, Pyeloureterostomy, ureteric duplication
CASE REPORT:
INTRODUCTION:
By definition, an ectopic ureter is any ureter, single or duplex, that does not enter the trigonal area of the bladder (Glassberg et al, 1984). In a duplex system, this is inevitably the upper pole ureter, presumably due to its budding from the mephric duct, later than the lower pole ureteral bud. If it is simply near the bladder neck, it is not technically ectopic, as the criteria for ectopic ureter require entry of the ureter at the level of the bladder neck or distal level. In females, the ectopic ureter may enter the vagina.

CASE SUMMARY:
A 19 year old female presented with continuous urinary leak since birth. She was able to pass urine normally with around 250 to 300 ml/void. The day time frequency is 5 to 6 times and night time frequency is 0 to 1 time. Patient had normal bladder sensation. There was no history of swelling in the back/loss of sensation/fever/ loin pain. No history of hematuria/calculuria/calculuria/ pyuria. No significant past medical history. Patient has a brother and he is normal. Attained menarche at 14 years with regular past medical history. Patient has a brother and he is normal. Attained menarche at 14 years with regular...

EXAMINATION:
On general examination there was no pallor. Abdomen was soft, non tender, with no mass and bowel sounds were heard. External genitalia examination showed a normal meatus. Vaginal examination showed urinary leak from the left lateral wall of vagina and the ureteric orifice was seen in the left lateral wall and cervix was normal [fig-1].

INVESTIGATIONS:
Urine routine was normal. Urine culture and sensitivity showed no growth. Total count was 8000 cells/cu.mm. Differential count was polymorphs - 65%, lymphocytes - 30% and eosinophils - 5%. Hemoglobin - 11 gm%, ESR - 10 mm/hr, PCV - 30%, Urea - 20 mg%, Creatinine - 0.7 mg%, Random blood sugar - 85 mg%, Sodium 135 meq/l, Potassium - 3.5 meq/l. Ultra sound KUB: Right kidney measured 10.5 cm and the pelvicalyceal system was normal. Left kidney measured 12 x 5 cm and the pelvicalyceal system was normal. Bladder was normal. X-ray KUB - normal. CECT-KUB showed left double moiety and contrast was also seen in vagina suggesting ectopic ureteric orifice in the vagina. [fig 2&3]. MCU was normal. Cystoscopy showed normal meatus, urethra, bladder neck, trigone. Bilateral ureteric orifices were seen in normal position and efflux was present. Both lateral wall & dome were normal. Bladder capacity - 350 ml. RGP was done from both the effected ureter and ureteric opening in the bladder. It showed complete duplication of left ureter with upper moiety ureter opening in the vagina [fig 4]. Patient was diagnosed to have left double moiety with upper moiety ureter opening in the vagina.

Treatment:
Pyloureterostomy was done through 12 rib tip incision. Up per moiety ureter was anastomosed with lower moiety pelvis. [fig 5&6]. Patient stopped leaking urine in the immediate post op...
Post op period was uneventful.

**DISCUSSION:**
An ectopic ureter is any ureter, single or duplex, that does not enter the trigonal area of the bladder. In a duplex system, the ectopic ureter inevitably the upper pole ureter, presumably due to its budding from the mesonephric duct later than the lower pole ureteral bud (Weigert-Meyer rule-inverserelationship of the duplex ureteral orifices). In females, the ectopic ureter may enter anywhere from the bladder neck to the perineum and into the vagina, uterus and even rectum. Gartner duct, the remnant of the wolfian duct to which the ectopic ureter opens, and the duct typically runs parallel to the vagina (the müllerian structure) and with rupture communication with the vagina is established. One of the classic symptoms is continuous wetting. In males, the ectopic ureter always enters the urogenital system above the external sphincter or pelvic floor, and usually into the woflian structures including vas deferens, seminal vesicles, and the ejaculatory duct. Urinary incontinence can be due to an ectopic ureter in a girl but not in a boy. The treatment options include pyeloureterostomy /ureteroureterostomy, partial nephrectomy, or heminephrectomy of a duplex system.

**CONCLUSION:**
Adult patient presenting with ectopic ureter with continuous urinary leak is very rare. This patient presented with continuous urinary leak since birth but after treatment the patient is totally symptom free.

![FIG-1:URETERIC ORIFICE OPENING IN TO LEFT LATERAL WALL OF VAGINA](image1)

![FIG-2:CT-KUB LEFT DOUBLE MOIETY WITH COMPLETE DUPLICATION OF URETER](image2)

![FIG-3:LEFT UPPER MOIETY URETER OPENING IN THE VAGINA](image3)
REFERENCE:


