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A CASE OF ECTOPIC URETER WITH VAGINAL INSERTION - ADULT PRESENTATION

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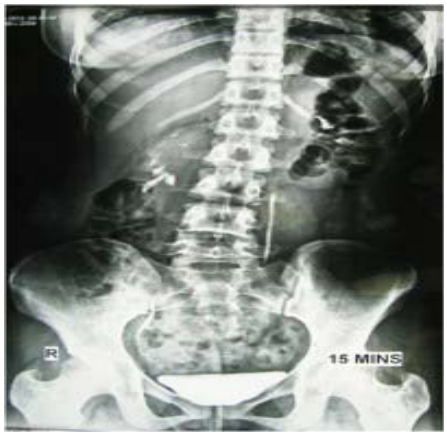
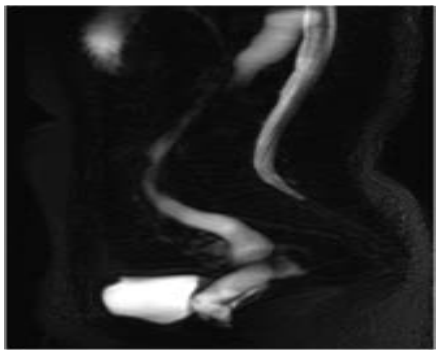
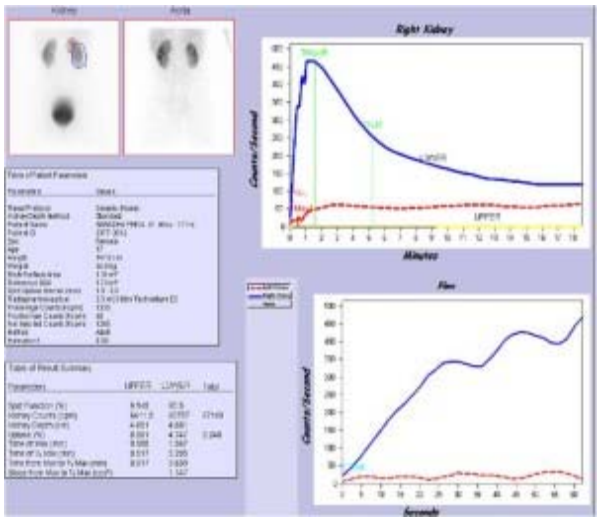
Abstract :
Complete duplication and an ectopic ureter are rarely identified in adulthood. Continous dribbling and incontinence with normal micturition is the classic feature in females (1).Here we present a case report of seventeen year old female with continuous incontinence since birth with episodes of recurrent UTI.The case was evaluated with imaging and found to have a right duplex system with an upper pole moiety ureter with ectopic insertion in to the vagina. MagneticResonance urogram (MRU) was very useful to delineate the ectopic ureteric insertion.The poorly functioning upper pole moiety was diagnosed with nuclear study.Right upper pole heminephrectomy was done with excision of the ureteric stump. The post operative period was uneventful.
Keyword : Ectopic ureter, Incontinence, MRU, Heminephrectomy

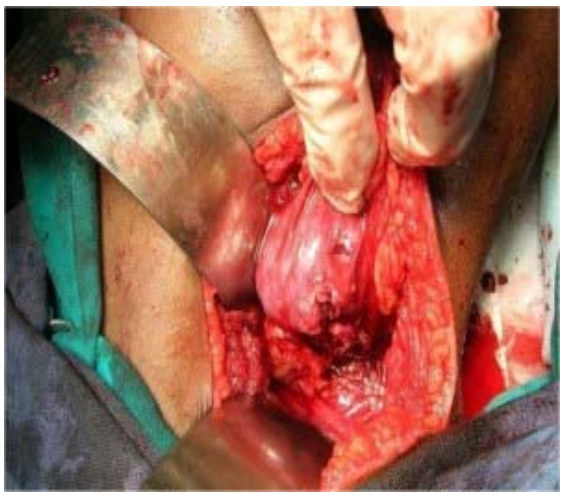


ivu MR urogram





radioisotope scan



intraoperative photograph

CASE REPORT :

A 17 year old girl presented to us with history of continuous urinary dribbling since childhood with episodes of recurrent UTI.Patient had a normal voiding pattern.Her medical history was unremarkable there was no H/O diabetes or neurological disease. Examination revealed urine leakage per vaginum.Per vaginal and per speculum examination did not reveal any abnormal opening. Urinalysis showed the growth of E.Coli which was treated with the sensitive antibiotic.USG showed right duplex system with dilatation of upper pole moiety.

Left kidney and bladder were normal. IVU was done which did not reveal the upper pole moiety possibly due to poor function. Hence an MR urogram was done. MRU fast spin T2 weighted image showed a right duplex system with ureter of the upper moietyinserting ectopically into the vagina. Cystoscopy was done which showed bilateral normal ureteric orifices. Renal Isotope scan was done which showed a poorly functioning right upper pole moiety with a differential function of < 10%. Since the patient had a history of continuous incontinence and recurrent episodes of UTI, surgery was planned. Through a right flank incision , right upper pole hemi nephrectomy was done. A Gibson incision was then used to excise the remaining ureteric stump up to it's insertion into the vagina.Vascularity of the lower pole normal ureter was preserved. The post operative period was uneventful.Patient was fully continent with a normal voiding pattern. DISCUSSION : Abnormalities of ureteral development including ectopic ureters and ureteroceles represent a large component of clinical urology and 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. By definition, an ectopic ureter is any ureter, single or duplex, that does not enter the trigonal area of the bladder. In a duplex system this is inevitably the upper pole

ureter, presumably due to its budding from the mesonephric duct later than the lower pole ureteral bud (2). In females the ectopic ureter may enter anywhere from the bladder neck to the perineum and into the vagina, uterus, and even rectum. It may be associated with a cyst of Gartner duct, the remnant of the wolffian duct from which the ureter buds, and may include cystic dilation of the duct. The duct typically runs parallel to the vagina (the mullerian structure) and with rupture of the cystic ductal structure, communication with the vagina is established.This is the basis for incontinence, the frequent presentation of an ectopic ureter in females.

The incidence of ectopic ureter is around 1:2000 and is predominant in females with a ratio of 4:1.Typically a diagnosis is made in childhood, this entity rarely presents in adults. Nevertheless,ureteral ectopia should be included in the differential diagnosis of adults who present with UTI orcontinuous incontinence (2).USG may show a dilated upper moiety which has to be differentiated from a complex renal cyst and acaliceal diverticula when the proximal ureter is not dilated. USG cannot also visualise the entire ectopic course of the ureter. Even IVU will not be fully informative as the majority of the cases themoiety with ectopic ureter is non or poorly functioning. Hence MR urogram is a highly sensitive testfor diagnosing a duplex system and fully visualising the extent of ectopic ureter and its insertion (3,4).If both moieties have good function, ureteroureterostomy or ureteropyelostomy can bedone.In case,the moiety is poorly functioning, heminephrectomy has to be done. The distal ureteric stump is excised completely only in patients with vesicouretericreflux or recurrentUTI (5).

CONCLUSION:

Ours was a case of delayed presentation of continuous incontinence in a female since childhood.Routine imaging like USG and IVU were inconclusive.The use of MR urogram established thediagnosis of a duplex system with ectopically inserting ureter into the vagina.The upper pole moietywas found to be poorly functioning and patient underwent heminephrectomy with removal of uretericstump upto the level of insertion into the vagina.

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