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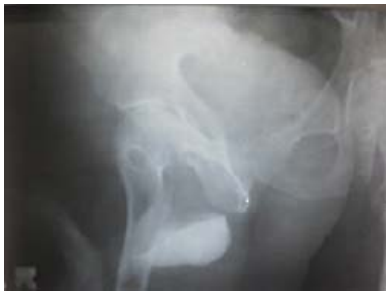
Congenital Anterior Urethral Diverticulum in a Male- A Case Report

VENKAT KARTHEY RAMESHV
Department of Urology,
STANLEY MEDICAL COLLEGE AND HOSPITAL

Abstract :
Urethral diverticulum in males can be congenital or acquired (secondary to stricture, stenosis). Congenital urethral diverticulae of male urethra are rare. Urethral diverticulum generally located in the ventral aspect of the anterior urethra, though it can be found anywhere from the bulbous to the mid pendulous portion of the urethra. Review of literature regarding their cause, classification, and management is multifaceted and controversial. The symptoms depend largely on the size of the diverticulum. Diagnosis of a urethral diverticulum is often clinical. This is a case report of a large congenital diverticulum in the anterior urethra in a 33 year old male who was successfully treated with diverticulectomy and urethroplasty. Postoperatively there was a marked improvement in the symptoms, with good cosmesis.

Keyword : Urethral Diverticulum, Male Urethra, Urethroplasty



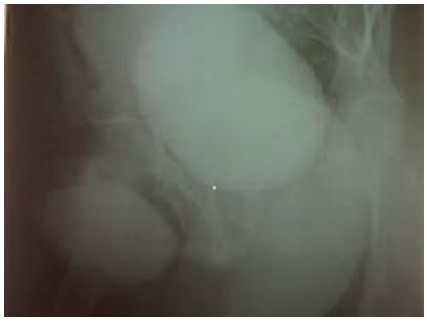
PREOP AUG

Case Report :

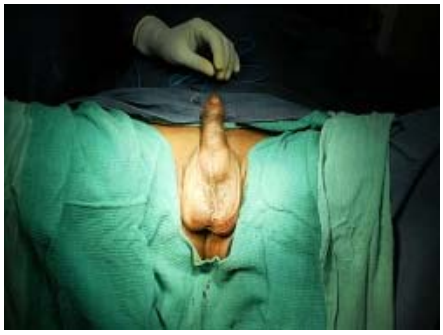
A 33yr old male presented to our institution with complaints of progressive difficulty in voiding of 6 months duration. He also noted a swelling in the root of the penis during this period, which gradually increased in size during voiding. There was no h/o trauma/surgery, recurrent UTI or other LUTS.

General and systemic examination was normal. Local examination of the penis revealed a 5x 3cm globular swelling in the ventral aspect of root of penis extending on to the scrotum. There were no scars or sinuses. The swelling was soft and compressible. Rest of penis, external genitalia

and digital rectal examination was



MCU

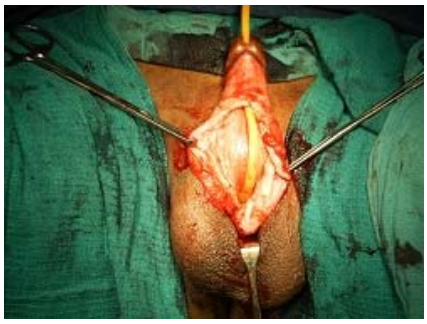


His complete blood count, renal function tests and ultrasound KUB were normal. Urine culture revealed the presence of significant growth of E.Coli which was treated with appropriate antibiotic. An Ascending urethrogram (AUG) revealed a diverticulum in the ventral anterior urethra with no entry of contrast into proximal urethra or bladder. Attempts to catheterise the bladder per urethra for a Voiding Cystourethogram (VCUG) failed as the catheter kept coiling in the large diverticular sac. Cystoscopy was then done which revealed a large ventral, wide mouthed diverticulum in the proximal penile urethra. A lot of debris was present in the diverticulum, which appeared inflamed. The rest of the urethra and bladder were normal. A suprapubic cystostomy was done to divert the urine from the inflamed and infected diverticulum. Following a course of systemic antibiotic, Suprapubic Micturition Cystourethrography was done. The large, anterior diverticulum in the proximal penile urethra was well demonstrated.

INTRAOP 1

Excision of the urethral diverticulum with primary closure was done after 4 weeks. The urethral catheter was removed after 3 weeks following which the patient voided well. The SPC was removed and strapped. A follow up AUG and VCUG were done which were normal.

Discussion :

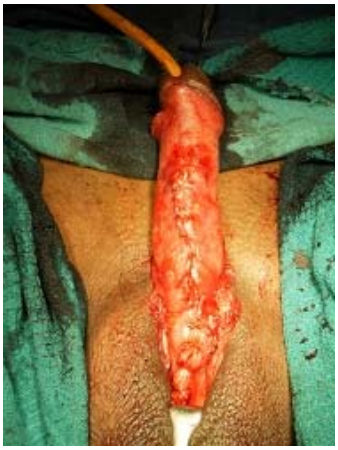


The term urethral diverticulum is used to denote an epithelised, saccular dilatation that is separate from the urethra, but communicates by means of a discrete orifice. On the other hand, in cases of megalourethra, the whole of the anterior urethra is dilated secondary to the deficiency of the spongy and erectile tissue of the penis.

INTRAOP 2

Abeshouse [(1)] *classified the urethral diverticulum on etiological grounds i.e congenital*or acquired. Congenital urethral diverticula are rare and situated on the ventral side ofthe anterior urethra.Various theories attempt to explain the formation of the congenital urethral diverticulum.

The first hypothesis is that it is derived from the partial lack of spongy body,representing incomplete hypospadias [2]. Second hypothesis links it with valves of the anterior urethra , appearing secondarily to these, which are in turn a consequence of the absence of linkage between urethral segments [3]. The third hypothesis is that the divertiuclum arises from the spontaneous rupture of the paraurethral cysts towards the lumen of the urethra [3].

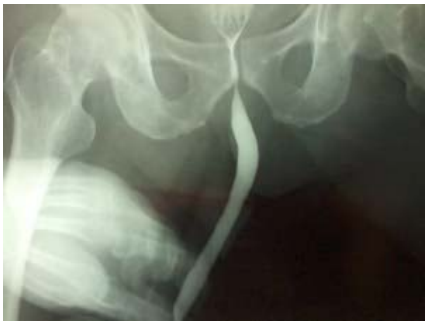


INTRAOP 3

Congenital urethral diverticula may be either saccular or tubular [4]. The saccular type has a true neck and may cause urinary obstruction .The tubular or diffuse type is located more proximal to the urethral bulb Diagnosis of anterior urethral diverticulum is usually possible clinically [5] .As they increase in size there may be involuntary dribbling of urine on movement or pressure and as the course progresses they become palpable and visible. Confirmation of the diagnosis is made through Ascending Urethrogram (AUG) and Voiding Cystourethrogram (VCUG) [6].Excision of the diverticulum with urethroplasty is the standard treatment in these cases [4].

In Our Case :

Ventral urethral diverticulum as seen in our case is rare in a male. Such diverticula are seen more in females. It



POSTOP AUG

could not be fitted into the megalourethra (fusiform) variety as in our case, the diverticulum was in the penile shaft, with wide mouth separating the two corpora cavernosa laterally. Corpus spongiosum was present, but thinned out as confirmed by histopathology, so it could not be considered as one of the megalourethra varieties. This could not have been an acquired diverticulum also, as there was no obstruction to the urine flow seen in the segment of urethra distal to the diverticulum.

Conclusion :

Congenital urethral diverticulae of male urethra are rare. Confirmation of the diagnosis is made through Ascending Urethrogram (AUG) and Voiding Cystourethrogram (VCUG). Excision of the diverticulum with urethroplasty is the standard treatment in these cases.

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