HUTCH BLADDER DIVERTICULA: A VERY UNCOMMON ENTITY IN ADULTS

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Summary.- OBJECTIVE: We present the case of an adult patient diagnosed with Hutch diverticula after examination. Indications were of a type of congenital bladder diverticula very rare in children and unusual in adults, as very few cases in adults are addressed in the literature.

METHODS: Intravenous Urography and Voiding Cystourethrogram (VCUG) were realized.

RESULTS: The intravenous urography revealed ureterohydrenephrosis in the excretory phase that did not have repletion defects suggesting lithiasis at distal urethra. On the other hand, a narrowing of the urethra was observed at the point of bladder entry due to the presence of a juxta-meatal bladder diverticulum.

Next a retrograde cystography was performed which ruled out vesicourethral reflux and revealed that the diverticulum presented elevated residuals after urination. As a result of our patient’s clinical characteristics and the absence of vesico-urethral reflux, we decided to perform an endoscopic surgical opening of the diverticula’s neck.

CONCLUSIONS: Hutch paraurethral diverticulum is an very uncommon entity, even in infancy. The Voiding Cystourethrogram (VCUG) is especially useful in diagnosing these patients. In symptomatic cases surgical correction of the diverticulum is required.

Keywords: Hutch diverticula. Endoscopic management.

Resumen.- OBJETIVO: Presentamos el caso de un paciente adulto al que se le diagnosticó tras estudio realizado de divertículo de Hutch. Señalar que se trata de un tipo de divertículo vesical congénito muy infrecuente en la infancia y excepcional en el adulto, siendo muy escasos los casos en adulto comunicados en la literatura.

MÉTODOS: El paciente fue estudiado mediante Urografía Intravenosa y Cistouretrografía Miccional Seriada. Una vez evaluadas las pruebas complementarias y establecido un juicio diagnóstico, se revisa la literatura y las alternativas terapéuticas.

RESULTADOS: La Urografía intravenosa demostró en la fase excretora una ureterohidronefrosis sin defectos de repleción sugestivos de litiasis a nivel ureteral distal. Por otra parte se observaba un afilamiento del uréter a su entrada en vejiga debido a la presencia de un divertículo vesical juxta-urethral.

Posteriormente se realizó una cistografía retrógrada que descartó refluo vesicoureteral y mostró que el divertículo presentaba residuo elevado tras la micción. Dadas las características de nuestro paciente y la ausencia de refluo vesico-ureteral ipsilateral asociado; se decidió un tratamiento endoscópico con apertura de la boca del divertículo. La evolución fue satisfactoria.

CONCLUSIONES: El divertículo paraureteral de Hutch es una entidad infrecuente, incluso en la infancia. Para el diagnóstico en estos pacientes resulta especialmente útil la cistouretrografía miccional seriada (CUMS). Los síntomas, complicaciones asociadas así como la presencia de refluo determinarán el tipo de tratamiento a realizar.

Palabras clave: Divertículo de Hutch. Tratamiento endoscópico.

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INTRODUCTION

Hutch diverticula are characterized as uncommon congenital bladder diverticula, located beside the urethral meatus (paraurethral) that is commonly associated with vesicourethral reflux. It is more frequent in male children, and reported cases in adults are very rare (1,2). The interest in studying this pathology in adults is that it may cause pain similar to renal colic with long evolution due to urethral obstruction in the absence of lithiasis to justify the symptoms.

CASE REPORT

Male, 56 years of age, with no medical history of interest, who presented with colic-type pain irradiating through a renal-urethral route with several years of evolution associated with suprapubic pain. Complementary examinations completed indicate a normal PSA (1.45 ng/mL) and negative urine culture, while simple flowmetry ruled out the presence of obstruction in the lower urinary tract, showing a bell curve with maximum flow of 19 mL/sec and average flow of 8.7 mL/sec for an evacuated volume of 385 mL. A urinary tract ultrasound revealed a discrete dilation of the left proximal ureter and a marked juxtameatal dilation of the urethra. In order to elucidate the aetiology of the obstructive process, an intravenous urography was ordered, which revealed ureterohydronephrosis in the excretory phase that did not have repletion defects suggesting lithiasis at distal urethra. On the other hand, a narrowing of the urethra was observed at the point of bladder entry due to the presence of a juxtameatal bladder diverticulum. Next a retrograde cystography was performed which ruled out vesicourethral reflux and revealed that the diverticulum presented elevated residuals after urination (Figures 1A and 1B). The rest of the examination was normal.

Faced with the findings of the complementary examinations it was decided that an endoscopic study and treatment would be performed. A cystoscopy was performed under general anaesthesia revealing the presence of a left paraurethral diverticulum, with narrow mouth intimately related to the meatus (Hutch diverticulum). An endoscopic diverticulectomy was performed, making an incision at 6 hours over the mouth of the diverticulum to the bladder neck preserving the integrity of the urethral meatus. Twenty four (24) hours after intervention the patient was discharged without complications. At 6 months after intervention, the urinary tract ultrasound shows scarce post-urinary residuals in the diverticulum (20 cc.) and the absence of significant renalurethral ectasia. The control cystoscopy performed revealed a broad mouth behind the endoscopic opening (Figure 2). In successive post-surgical controls the patient never referred to a crisis of renal-urethral pain or other symptoms related to Hutch diverticula.

FIGURE 1A. INTRAVENOUS UROGRAPHY (IVU): Narrowing of the left terminal urethra in the excretory phase (45 minutes) due to the presence of the left paraurethral saccule image.

FIGURE 1B. VOIDING CYSTOURETHROGRAM (VCUG): Retrograde phased image showing bladder diverticulum with broad capacity in the lateral projection.
DISCUSSION

The definition of bladder diverticulum corresponds to a protrusion of the mucous membrane through a defect in the detrusor musculature. Vesical diverticula are classified according to their origin as: congenital or acquired (as a consequence of obstruction of the lower urinary tract or due to diseases causing neurogenic bladder) (3).

The following are described within the category of congenital vesical diverticula: urachal diverticula (produced by the incomplete obliteration of the allantoic duct) and paraurethral or Hutch diverticula (development of paraurethral saccule produced by a muscular defect of the urethral insertion in the bladder trigone) (4). The first author to observe that vesical diverticula could appear in the otherwise normal bladders of children as a congenital anomaly was J.A. Hutch, thus this type of pathology is known as “Hutch diverticula” (5).

This entity is uncommon even in infancy. Data exist in the literature, such as the fact that a study protocol for urinary infections in girls only diagnosed one case in 532 patients (6). It is more frequent in boys than in girls while it is rare in adults (1,2).

The Hutch diverticulum can be asymptomatic or can cause diverse symptoms as a consequence of urethral meatus obstruction (pain may be similar to renal colic as in the case we present here), urinary retention inside the diverticulum (urinary infections) and in very rare cases (voluminous diverticula) obstruction of the lower urinary tract and cyanosis of the lower extremities due to extrinsic compression of venous backflow (1,7, 8).

The voiding cystourethrogram (VCUG) is especially useful in diagnosing these patients (1,4). This imaging test allows us to see the morphology and location of the diverticulum as well as the presence of vesicourethral reflux. Other tests that help in the diagnosis of this entity are intravenous urography and cystoscopy (1,2,9).

Given the low prevalence, there is no a gold standard treatment for this congenital disease. The latter will depend on the symptoms and complications that the diverticulum generates or brings on. And so are reported in the literature both the conservative and the surgical reconstruction. When vesicoureteral reflux is associated, treatment should be focused on solving it, being the diverticulectomy and ureteroneocystostomy, the most accepted one.

Other options are intravesical ureteroneocystostomy and subureteral injection, success rate ranged between 79 and 82% for the subureteral injection and 91% for the intravesical ureteroneocystostomy (11-12). Bilateral reflux and grade 5 vesicoureteral reflux are correlated to with failure of conservative management.

Our patient didn’t associate vesicoureteral reflux, the position of the diverticulum and its filling caused obstruction and colic pain. Due to endoscopic findings (3 cm diverticulum with narrow neck) and the absence of vesicoureteral reflux on cystography we decided the same treatment as the acquired diverticulum: endoscopic surgical opening of the diverticulum neck.

Therefore, we report the clinical case of a patient with congenital malformations of low prevalence which rarely appear in adulthood. Having reasoned the presentation and treatment given, this is in our opinion a very reasonable and valid option.

CONCLUSION

Hutch paraurethral diverticula are an very uncommon entity, even in infancy.

This entity can be asymptomatic or can cause diverse symptoms as a consequence of urethral meatus obstruction. The voiding cystourethrogram (VCUG) is especially useful in diagnosing these patients. This imaging test allows us to see the morphology and location of the diverticulum as well as the presence of vesicourethral reflux. With respect to treatment we may opt for an expectant attitude in those patients with small, asymptomatic diverticula. In symptomatic cases surgical correction of the diverticulum is required.

FIGURE 2. Image of postoperative endoscopy in which the left urethral meatus appears near the diverticular mouth in the mid lower left image. We see the width of the diverticular mouth after the intervention was performed (diverticulectomy).
REFERENCES AND RECOMMENDED READINGS
(*of special interest, **of outstanding interest)


