Bilateral Hutch periureteral diverticulum without reflux in an adult patient

Vite-Velázquez EJ,1 Venegas-Ocampo PJJ,2 Robles-Scott MA,2 Ochoa-Vázquez TN,2 Morales-García A,1 Macedo-González AJ.1

ABSTRACT
Hutch periureteral diverticulum is an unusual congenital entity occurring on or adjacent to the ureteral hiatus and is associated with reflux and ureteral obstruction in the majority of cases. It is more common in boys than in girls and is rarely found in adults.

Its clinical manifestations are varied, from renoureteral colic to inferior extremity cyanosis. A variety of results have been shown with conservative treatment and with open surgery using different techniques. The case of a 32-year old male patient is presented here. The patient manifested intermittent bilateral renoureteral colic as well as slight to moderate storage and emptying symptomatology of several years’ progression. Large periureteral diverticula with no reflux were found in the study protocol. Urodynamic study revealed infravesical obstruction and increased bladder capacity. Patient did not respond favorably to medical treatment and so diverticulectomy with transurethral incision of the prostate and open bilateral reimplant was carried out. Postoperative progression was satisfactory. Bladder capacity and residual urine were reduced and initial symptomatology disappeared.

RESUMEN
El divertículo paraureteral de Hutch es una entidad congénita infrecuente que ocurre en el hiato ureteral, o junto a él, y se relaciona con reflúo en la mayoría de los casos, con obstrucción ureteral agregada; es más común en niños que en niñas, y en adultos los casos identificados son raros.

Sus manifestaciones clínicas son diversas, desde cólicos renoureterales hasta cianosis de extremidades inferiores; se ha reportado el tratamiento conservador y la operación a cielo abierto, con diferentes técnicas y resultados variables. A continuación se presenta el caso de un paciente masculino de 32 años de edad que sufrió cólico renoureteral bilateral intermitente, así como síntomas de almacenamiento y vaciamiento de leves a moderados de varios años de evolución. En el protocolo de estudio se encuentran divertículos paraureterales de gran tamaño sin reflúo con una obstrucción infravesical y vejiga de capacidad aumentada en el estudio urodinámico, sin respuesta favorable al tratamiento médico; se decidió realizar una incisión transuretral de la próstata con diverticulectomía y reimplante ureteral bilateral abierto; se observó una evolución satisfactoria en el seguimiento posquirúrgico, con reducción de la capacidad vesical y la orina residual, además de desaparición de los síntomas de inicio.

1 Staff Urologist at the Urology Service of the Hospital General Regional No. 72 “Lic. Vicente Santos Guajardo” of the Instituto Mexicano del Seguro Social, Tlalnepantla, Estado de México. 2 Urology Specialty Resident at the Hospital Regional Licenciado Adolfo López Mateos of the ISSSTE, Mexico City. 3 Urology Specialty Resident at the Hospital De Especialidades del Centro Médico Nacional La Raza, Mexico City.

Corresponding author: Dr. Enrique Juvenal Vite Velázquez, Av. Lomas Verdes 925-22B Col. Lomas Verdes, Naucalpan de Juárez, Estado de México C.P. 52985. E mail: vitex_en10@yahoo.es
**INTRODUCTION**

Hutch periureteral diverticulum is a rare congenital entity that occurs in or adjacent to the ureteral hiatus and is associated with reflux in the majority of cases. Treatment has traditionally been ureteral reimplant with or without diverticulectomy. It is often associated with ureteral obstruction. Early surgical treatment is generally recommended in these cases. It is more common in males and is rare in the adult. Periureteral diverticulum has been reported in a 59-year-old female patient that was conservatively managed with prophylactic ciprofloxacin. Tomography revealed 8.5 x 8 x 7 cm periureteral diverticulum with no hydronephrosis that complicated radical hysterectomy dissection. There are very few cases reported in the literature and the majority are found in children through excretory urography or mictional cystography. Only one case out of 523 tests carried out in urinary tract infection study protocol was found. There are series in which children are the most affected and conservative management has been maintained when there is no association with neurogenic bladder or infravesical obstruction. When there is ureteral obstruction, clinical symptoms may be characterized by renoureteral colic-like pain of long progression. Acute urine retention due to extrinsic compression of the urethra and bladder exit has been reported. The latter required surgical treatment due to infravesical obstruction and constitutes one of the uncommon indications for diverticulectomy in children. Rarer manifestations such as inferior extremity cyanosis due to compression in the venous return of the affected extremity have been reported. In regard to management, extravesical approaches in diverticuloplasty and diverticulorrhaphy showing good results in children have been reported.

**CASE PRESENTATION**

Patient is a 32-year-old man with no significant previous medical history. He had intermittent bilateral renoureteral colic for several months and his main complaint was slight to moderate voiding and storage symptomatology with progression of several years that was first treated empirically and then by a physician without good results. Patient entered the study protocol with bladder ultrasound showing images suspicious of bilateral bladder divertici (Image 1). Mictional cystography (Images 2 and 3) and excretory urography (Image 4) that showed large periureteral diverticuli without reflux that induced slight to moderate bilateral pyelocaliceal dilatation with right predominance. Urodynamic test was ordered to rule out probable detrusor-sphincter dyssynergia. Infravesical obstruction was reported along with 800 mL bladder capacity with 220 mL postmictional residual urine. Patient did not respond well to conservative antibiotic prophylaxis and alpha blockers. Cystoscopy identified hyperplasia of the posterior commissure with angulation of the prostatic urethra close to 90° in addition to the previously identified diverticuli. Transurethral incision of the prostate with diverticulectomy and open bilateral ureterovesical reimplant was performed. Patient had excellent postoperative progression with a bladder capacity reduction to 680 mL and postmictional residual urine of 40 mL at 3 months. Voiding symptomatology disappeared.

**Key words:** periureteral diverticulum, Hutch diverticulum, bladder diverticulum, vesicoureteral reflux, ureteral obstruction.

**Palabras clave:** divertículo paraureteral, divertículo de Hutch, divertículo vesical, refluo vesicoureteral, obstrucción ureteral, México.
CONCLUSIONS

A rare bilateral periureteral diverticulum in an adult patient required uncommon surgical treatment due to association with infravesical obstruction resulting in positive outcome.

BIBLIOGRAFÍA