

Ureterosciatic Hernia Causes Obstructive Uropathy

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Obstructive uropathy can be caused by urolithiasis, fibrotic ureteral stricture, inflammatory ureteritis with polyp formations, ureteral malignancy and various forms of external compression. Ureteral herniation is a relatively rare cause of obstructive uropathy and has been reported with herniation sites including inguinal canal, femoral canal and sciatic foramen. Most ureteral herniations occur in the inguinal area. In the literature, previous cases of sciatic ureter have been treated with observation in asymptomatic patients or with surgery in patients with obstructive uropathy or clinical symptomatology. We report the case of a 91-year-old female with asymptomatic hydronephrosis of the left kidney due to extremely rare ureterosciatic herniation. Her global renal function was acceptable. As she was elderly and a poor surgical candidate, watchful waiting was recommended after discussion with the patient and her family. [*J Chin Med Assoc* 2008;71(9):491–493]

Key Words: hydronephrosis, sciatic hernia, ureter

Introduction

Ureteral herniation is uncommon. The most frequent herniation site of the ureter is the inguinal canal. The greater sciatic foramen is rarely a location for ureteral herniation, with only 17 cases reported in the literature.¹ Diagnosis depends on excretory urography or computed tomography (CT) images. We report a case of ureteral herniation into the sciatic foramen, resulting in ipsilateral renal wasting and hydronephrosis. Most asymptomatic patients have been treated conservatively, with surgery reserved only for symptomatic patients.¹

Case Report

A 91-year-old female was referred to our urologic department in April 2004 for left hydronephrosis. She had just recovered from pneumonia of the left lower lobe. At that time, chest CT was arranged; it incidentally revealed severe left hydronephrosis with thinned renal cortex. She did not have any complaints of discomfort associated with the hydronephrosis. Cystoscopy and retrograde pyelography were arranged. Severe trabeculation of the urinary bladder wall and a tiny stone within a small diverticulum were found on cystoscopy.

Because the left ureteral orifice could not be identified, retrograde pyelography was not completed. Abdominal CT was arranged instead and herniation of the left ureter into the sciatic foramen was shown as the cause of the unilateral obstructive uropathy (Figure 1). The patient was elderly and a poor surgical candidate. After discussion with the patient and family, they preferred that she did not receive any invasive procedure or surgery. Her renal function was acceptable (serum creatinine, 0.8 mg/dL). She did not feel any subjective discomfort. Febrile urinary tract infection and pyelonephritis were also not found. Despite thinning cortex of the left kidney and hydronephrosis, conservative watchful waiting was chosen.

Tracing back her history, it was found that the patient had undergone 2 episodes of abdominal operation. One was appendectomy for acute appendicitis when she was in her 40s and the other was an unknown procedure for complications of pancreatitis. About 2 years before this episode of pneumonia, she had been diagnosed to have bladder dysfunction with bilateral hydronephrosis. Urethral catheterization had been performed and the catheter removed 3 months later when cystometry returned to normal. However, no medical records to follow the subsequent hydronephrosis could be found.



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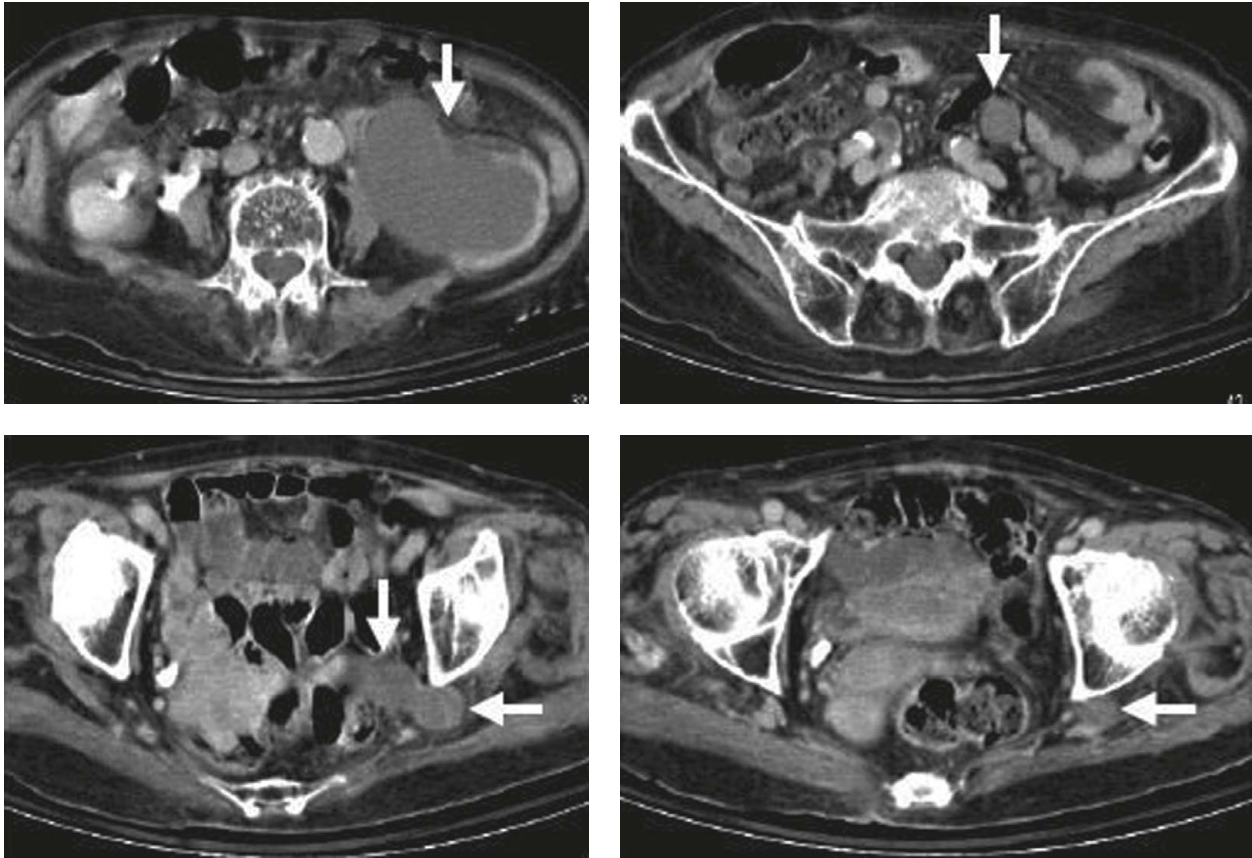


Figure 1. Computed tomography shows marked hydronephrosis of the left kidney and hydroureter to the level of the sciatic notch. Left ureter (arrows) is seen posterior and lateral to the ischial spine.

Discussion

Herniation of the ureter is relatively rare, with approximately 130 cases reported in the literature.¹ The most reported ureteral herniation site is the inguinal canal, and the ureter may even herniate into the scrotum. The hernia may be of the paraperitoneal type (80%), when the ureter slides beside the peritoneal sac, or extraperitoneal, when it is accompanied by retroperitoneal fat only.² Seventeen cases of ureteral sciatic herniations have been reported in the literature.¹ We report this rare case of herniation into the greater sciatic foramen.

Rommel et al have provided a detailed description of the pathogenesis and anatomic aspects.² The sacrospinous ligament divides the sciatic notch into the greater and lesser sciatic foramen.¹ The greater sciatic foramen is further subdivided into superior and inferior compartments by the piriformis muscle. The larger sciatic foramen and the wider pelvis may contribute to the elderly female predominance. However, the predisposing factors are defect in the parietal pelvic fascia, atrophy of the piriform muscle, and hip joint disease.

Structures found in sciatic hernia sacs have included small intestine, Meckle's diverticulum, omentum, colon, ovary, fallopian tube, bladder, and ureter. In contrast, pelvic fascia defect causing ureterosciatic hernia in the elderly female often results in chronic obstruction.

The diagnosis can be made on intravenous pyelography, retrograde pyelography, antegrade pyelography and CT. Sciatic ureter has a characteristic radiologic appearance in which a loop of ureter is displaced laterally, inferiorly, and posteriorly through the sciatic notch on urography.¹ This image, known as the "curlicue" ureter, was first described by Beck et al in 1952.³ On CT imaging, the appearance of a sciatic material-filled ureter posterior and lateral to the ischial spine confirms the diagnosis.¹

The choice of treatment varies according to the clinical conditions. In the earlier 13 cases, the repair method was open surgery. Surgical options include excision of the hernia with reimplantation of the remaining ureter, reduction of ureter length, and transabdominal or transgluteal surgical reduction of the hernia plus fixation of the ureter.² Minimally invasive techniques such as ureteroscopy or antegradely placed stent were

later reported to be successful.¹ The cause in elderly female cases was considered to be defect in the pelvic fascia, which was confirmed by reported operative findings: a pelvic fascia defect with dense fibrosis around the involved ureter, and repair of the defect was often necessary to avoid recurrence. In our case, in consideration of the old age and asymptomatic presentation, conservative observation was considered as the optimal strategy.

References

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