Ureteral sciatic herniation occurring through the sciatic foramen is rare, and its etiology is varied. It is difficult to identify ureteral sciatic herniation with a physical examination, and the condition can cause variable degrees of urinary obstruction. Thus, diagnosis and treatment of the disorder are important. We present a case of ureteral sciatic herniation with hydronephrosis, which was treated by double J catheter placement.

**Index words**: Ureter  
Hernia  
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Tomography, X-Ray Computed

Ureteral herniation occurring through the sciatic foramen is rare, and its etiology is varied. It is difficult to identify ureteral sciatic herniation with a physical examination, and the condition can cause variable degrees of urinary obstruction. Thus, diagnosis and treatment of the disorder are important. We present a case of ureteral sciatic herniation with hydronephrosis, which was treated by double J catheter placement. Intravenous urography (IVU) showed a curved, laterally displaced ureter and CT images clearly depicted a herniated ureter through the sciatic foramen. The patient was treated transiently with a double J catheter.

**Case Report**

A 74-year-old woman was admitted to our hospital in 2005 with a voiding difficulty. The patient had diabetes mellitus, hypertension, and a history of myocardial in-
farction. The patient also had a compression fracture of the L2 vertebra, which was treated by percutaneous vertebroplasty. In addition, the patient had a hysterectomy due to uterine prolapse. A plain supine radiograph of the abdomen (KUB) showed round radiopacity near the left sacroiliac joint; thus, a double dose IVU was performed. The left distal ureter was seen with a loop, coursing laterally and then medially, that is a characteristic finding of a ureteral sacral hernia (Fig. 1). However, the physician failed to notice any IVU abnormality, and the patient was diagnosed as having a neurogenic bladder or overflow incontinence.

Two years later, the patient was readmitted due to fever, voiding difficulty, nausea and vomiting. Urinalysis showed microscopic pyuria and hematuria, and a contrast-enhanced CT scan showed a dilated and laterally displaced left ureter (Fig. 2A). The left ureter was obstructed and had herniated through the sciatic foramen (Fig. 2B, C), and the left kidney showed hydroureter and mild atrophy and reduced parenchymal enhancement. However, the ureteral segment distal to the sciatic foramen was collapsed and entered the bladder in the normal location (Fig. 2D). The urologist placed a 6-French double J catheter under endoscopic guidance and the herniated left ureter was reduced (Fig. 3). Subsequently, the patient experienced symptom relief. The patient was being treated transiently with a double J catheter.

**Fig. 2.** A, B. Axial contrast-enhanced CT images show a dilated, laterally coursing left ureter (A, arrow) and a herniated left ureter though the sciatic foramen (B, arrow). C, D. Coronal reconstructed images show an obstructed left ureter with herniation into the sciatic foramen (C, arrow). The distal ureter is not dilated and enters the bladder in the normal location (D, arrow).
Discussion

The sacrospinous ligament divides the sciatic notch into the greater and lesser sciatic foramen. The greater sciatic foramen is bounded by the ilium laterally, by the sacrum and sacrotuberous ligament medially and by the sacrospinous ligament inferiorly [1-3].

A ureterosciatic hernia is very uncommon, and only 25 cases of a ureterosciatic hernia have been reported in the clinical literature since 1947 [4]. There have been no reported cases so far in Korea.

A sciatic hernia describes the protrusion of the peritoneal sac through the sciatic foramen, and most hernias occur through the greater sciatic foramen [3]. Sciatic hernial sacs have been reported to contain the small intestine, Meckel’s diverticulum, omentum, colon, ovary and ureter [2,5]. Predisposing factors include neuro muscular disease and cachexia that can cause pyriformis muscle atrophy [6]. A congenital pelvic fascia defect can also cause ureteral sciatic herniation, which seems to occur more frequently in women due to a larger sciatic foramen and a wider pelvis [7].

It is difficult to identity ureteral sciatic herniation with a physical examination as the gluteal muscles overly the sciatic foramen [2,7,8]. Moreover, as the disorder can cause urinary obstruction, diagnosis is important. Our case was revealed by hydronephrosis, because the diagnosis was not made after the initial IVU examination. Diagnoses can be made by the use of IVU, retrograde urography or CT imaging. In particular, CT imaging can clearly depict herniated ureters through the sciatic foramen. The characteristic finding of a ureteral sciatic hernia is a curled ureter seen on IVU, which shows ureter displacement laterally, inferiorly, and posteriorly [3]. In fact, a ureteral sciatic hernia was referred to as a “curlicue” ureter by Beck in 1952.

The patient was being treated with retrograde double J catheter insertion under endoscopic guidance. Double J catheter placement can provide rigidity to the ureter, reducing the hernia. Whether this could be considered a fundamental treatment is questionable. After removal of the catheter, surgical repair might be necessary. Surgical options include reduction of the hernia, excision of the length of the redundant ureter and reimplantation [2,9].

In summary, ureteral herniation through the sciatic foramen is very rare, and it can be diagnosed by IVU and CT imaging based on the characteristic findings and location.

References

임상 및 병리학적 고려사항

1. 소년시절의 휴식
2. 혹은 휴식 후의 휴식
3. 혹은 휴식 후의 휴식

수술은 환자에게서 얻을 수 있는 결과를 고려하여 개별화된 수술 전략을 선택한다. 

임상 및 병리학적 고려사항: double J catheter 사용을 통해 얻을 수 있는 결과를 고려하여 개별화된 수술 전략을 선택한다.