A 70-year-old man presented to our institution with recurrent urinary tract infections and deteriorating renal function. The patient has a background of chronic kidney disease stage 3 and had a previous admission with similar clinical presentation. He was haemodynamically stable and admitted for further investigations.

**Imaging Findings:**

Previously the patient underwent an ultrasound examination, which showed left-sided hydronephrosis with proximal hydro-ureter, but no obstructive cause was demonstrated. During the current admission, an unenhanced CT urinary tract was performed and revealed moderate-sized left inguinal scrotal hernia. This was associated with herniation of the sigmoid colon, as well as pulling of the sigmoid mesentery and the left ureter into the narrow-necked hernial sac (Figure 1). This resulted in narrowing of the distal ureter with consequential left kidney hydronephrosis and proximal hydro-ureter (Figure 2).

**Discussion:**

Uretero-inguinal hernia has only been documented in around 100 cases [1]. It is a rare finding in patients with native kidneys and is less common than bladder herniation, which occurs in about 1-4% of all adult hernias [2]. Leroux first reported ureteral herniation in 1880 from an autopsy report [1]. When present, ureteral herniation is associated with inguinal hernias twice as often as femoral hernias.

It is classified into two types based on anatomical variation; paraperitoneal [3] and extraperitoneal with the former being more common. The paraperitoneal type is seen in 80% of cases and is associated with peritoneal sac herniation with the ureter sliding beside the peritoneal sac. It occurs due to adherence to posterior peritoneum. The colon has also been reported to herniate with this type, which is demonstrated in our case report [4].

The paraperitoneal type is usually found in men (94%) and on the right side (67%). The higher incidence on the right side has been related due to the sigmoid colon lying on the left side [5].

Extraperitoneal is the second type, which is less common. It is known to have absent peritoneal sac and the ureter herniates alone or with retroperitoneal fat. Renal tract anomalies are more likely to be associated with this form of ureteroinguinal hernia, for example renal ptosis has been reported in 46% of cases [6]. On examination extraperitoneal hernias are usually small and mostly non-reducible. Both paraperitoneal and extraperitoneal hernias are predominantly indirect. When uretero-inguinal hernia is present, the upper urinary tract should be evaluated for other associated anomalies.

Hydronephrosis could be caused by dilated ureter extending into the inguinal hernia that may be angulated or
compressed by adjacent inflamed herniated contents. Another possible cause can be vesicoureteric reflux [6].

The majority of the documented cases of ureteroinguinal hernias are found intra-operatively during a hernia repair surgery or postoperatively when urinary leakage is noted from the wound [6]. Pre-operative multi-detector computed tomography urogram imaging is essential in such cases to allow for surgical planning and prevention of iatrogenic ligation and injury to the involved kidney and ureter.

Recommended treatment in this condition is careful surgical dissection of the ureter from herniated content. This allows the obstructive uropathy to resolve with subsequent improvement in renal function.

Although uretero-inguinal hernia is rare, it can be the cause of renal impairment. It does create a challenge for the surgeons due to the technical difficulty for insertion of the ureteric stents and high-risk ureter damage during the hernia repair.

**Differential Diagnosis List:** Uretero-inguinal hernia is the cause for obstructive renal dysfunction., None, None

**Final Diagnosis:** Uretero-inguinal hernia is the cause for obstructive renal dysfunction.

**References:**


**Description:** Axial section demonstrates herniating sigmoid colon (A) and left ureter (B) through a narrow-necked left-sided inguinal hernia. **Origin:** Department of Radiology, Aintree University Hospital NHS Foundation Trust, Liverpool, Merseyside, UK
**Description:** Coronal section showing the hydronephrotic left kidney (A) with the left hydroureter (B) being pulled into the inguinal hernia. **Origin:** Department of Radiology, Aintree University Hospital NHS Foundation Trust, Liverpool, Merseyside, UK