World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(CASE REPORT)

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The retrocaval ureter in a patient scheduled for junction cure: A case report

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World Journal of Advanced Research and Reviews, 2024, 22(01), 032–035

Publication history: Received on 20 February 2024; revised on 27 March 2024; accepted on 30 March 2024

Article DOI: https://doi.org/10.30574/wjarr.2024.22.1.1008

Abstract

Retro cave ureter (RCU), a congenital anomaly of the ureter, is characterized by the passage of the ureter behind the inferior vena cava (IVC). This rare condition, which clinically manifests as an obstructive syndrome of the upper urinary tract, can remain asymptomatic for a long time, leading to late diagnosis.

Keywords: Retrocaval ureter; Junction cure; Lumbotomy; UPR

1. Introduction

The retrocaval (circumcaval or postcaval) ureter is a rare congenital anomaly in the relationship between the inferior vena cava and the ureter, in which the infrarenal segment of the inferior vena cava is anterior to the embryologically normal ureter. It occurs as a result of an irregularity in the embryogenesis of the inferior vena cava and not in that of the ureter [1,2].

2. Case report

This is a 59-year-old patient with no previous pathological history, who presented with intermittent right-sided nephritic colic prompting self-medication with analgesics, before undergoing a uroscanner which revealed right-sided hydronephrosis contrasting with a thin ureter suggestive of pyeloureteral junction syndrome. Clinically, the patient was hemodynamically and respiratory stable, apyretic at 37, BP 13/8, with mild right lumbar tenderness without lumbar contact.

Biological workup: HB 13.2, WBC 7000, platelets 250000, PT 100%, creatininemia 10mg/l, urea 0.37 micromoles/L, kaliemia 3.5mmol/L, Na 135mmol/L, ECBU was sterile.

The choice of treatment was a right pyelo ureteral junction cure via lumbotomy, after patient consent.

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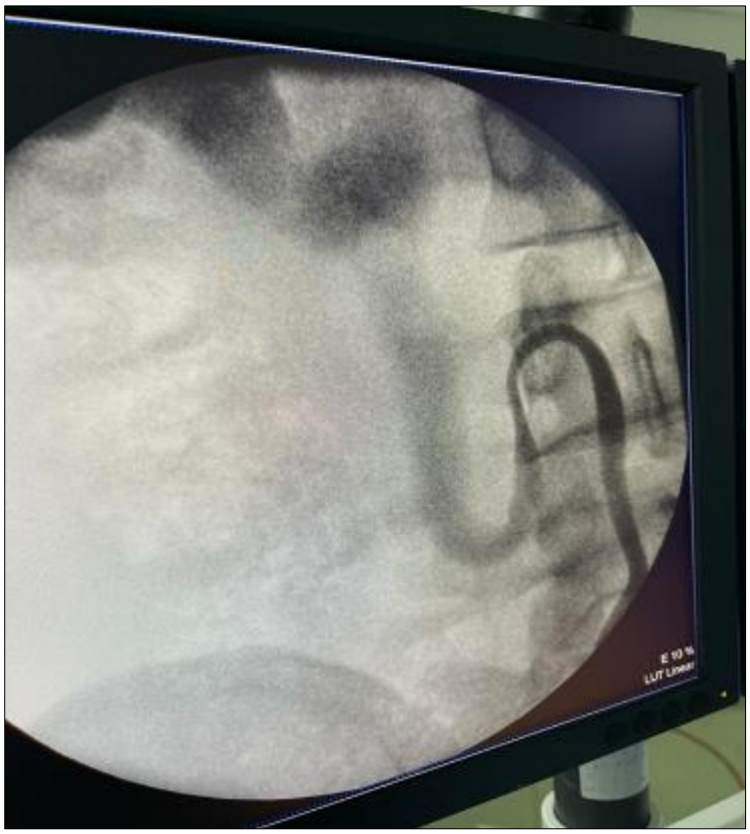

Figure 1 UPR image taken pre-op in the operating room showing an inverted J shape suggestive of a retro cave ureter

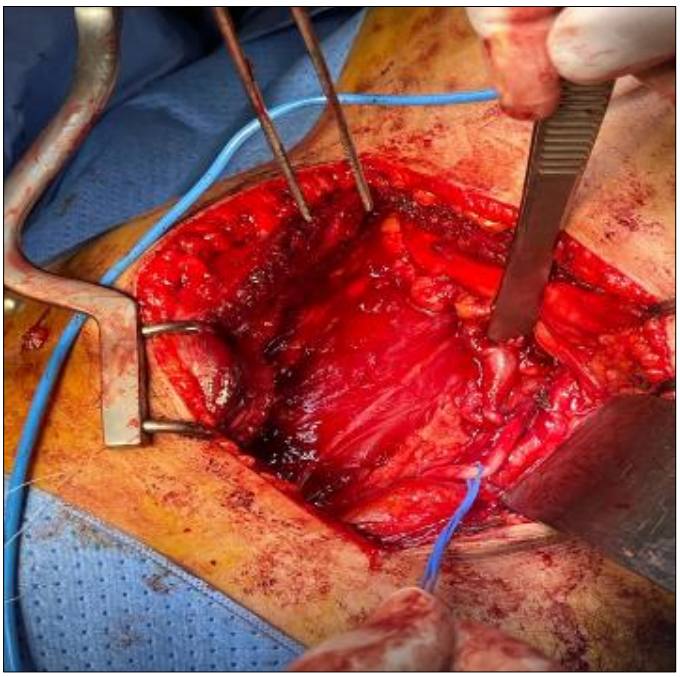

Figure 2 The per-op image shows a dilated ureter forming a sinusoidal path and passing behind the IVC

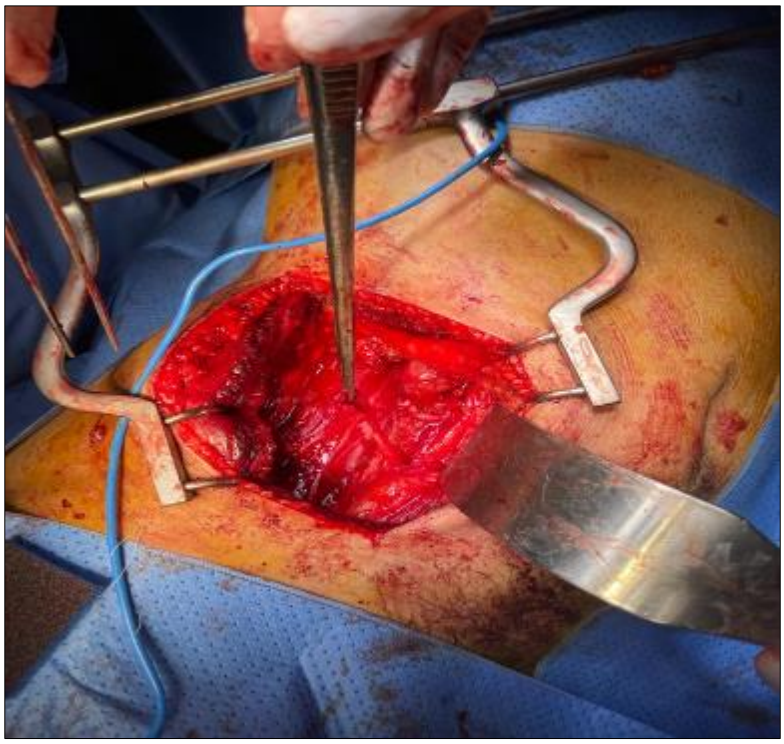

Figure 3 Ureteral uncoiling followed by terminoterminal ureterography

3. Discussion

Embryologically, the retrocave ureter is a developmental anomaly of the venous system and not of the urinary tract [3]. The pathogenesis of this pathology is such that it almost always occurs on the right side, although Brooks reported a case of a left retrocaval ureter as part of a situs inversus [3].

Anatomically, two types have been described, depending on the height of the retrocaval segment of the ureter [4]. Type I or low type, the most frequent, is characterized by the location of the retrocaval segment at the level of L3, thus radiologically producing the classic inverted "J" image [4,5] as in our patient's case. Type II is much rarer, crossing the IVC higher up, at the level of the renal hilum, with a horizontal course of the ureter in its initial segment [4,5].

Signs generally appear between the ages of 30 and 40.

Clinically, they may be intermittent lumbar pain suggestive of renal colic, hematuria or recurrent urinary tract infections. This is consistent with our case, where the patient suffered from intermittent CN [3].

Diagnosis of this malformation is based on imaging techniques, notably intravenous urography and uroscanner. In addition to their diagnostic value, they enable us to assess the consequences of ureteral obstruction, and detect associated lesions (congenital malformation, acquired pathology of the urinary tract). These elements help to determine therapeutic indications. At a distance, they enable patients to be monitored, whether or not they have undergone surgery [2]. MRI can be an alternative, providing multi-planar analysis of retroperitoneal structures and less radiation [2].

3.1. Treatment: [5]

Resnik and Kursh1 propose the following therapeutic indications:

- An asymptomatic URC with minimal or no caliceal stasis requires monitoring.
- Hydronephrosis with cortical atrophy requires nephrectomy if the contralateral kidney is healthy.
- Hydronephrosis with painful symptoms should lead to ureteral decompression.
- Ishitoya and al performed laparoscopic ureteral diversion.

4. Conclusion

The retrocaval ureter is a rare congenital anomaly of the ratio of the infrarenal segment of the inferior vena cava to the ureter. Initial diagnostic methods are abdominal ultrasonography and uroscanner. Inferior vena cava cavography is used only in exceptional cases. UroMRI may be an alternative. Although conventional open surgical treatment has satisfactory results, laparoscopic surgery offers many advantages, including a less invasive approach and good functional results.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of ethical approval

This publication meets the criteria of ethics.

Statement of informed consent

We had the patient's consent before publishing this case.

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