

VI Edition of the Clinical Cases Contest on
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Management of Bilateral Obstructive Uropathy Secondary to Urolithiasis: A Case Report with One-Year Follow-Up

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1. Abstract

Objective: To report a case of bilateral obstructive uropathy due to urolithiasis, successfully managed with bilateral JJ stent placement and conservative follow-up.

Method: Clinical description of a 74-year-old woman presenting with abdominal pain, reduced diuresis, and acute renal failure secondary to bilateral obstructive uropathy.

Results: CT revealed a 5 mm obstructing ureteral stone on the right and a 29 × 17 mm pelvic stone with additional calyceal calculi on the left. Bilateral JJ stents were placed under general anesthesia, achieving decompression. After one year of conservative management with alkalinization (LIT-CONTROL) and hydration, follow-up imaging demonstrated resolution of pelvic and ureteral stones

with preserved renal function. Stents were removed uneventfully in June 2025.

Conclusions: Bilateral obstructive uropathy due to urolithiasis can be managed successfully with endourological decompression and conservative measures, highlighting the importance of long-term follow-up and preventive strategies.

2. Introduction

Urolithiasis is a common cause of urinary tract obstruction and can result in significant morbidity, particularly when bilateral and associated with acute renal failure. The management of obstructive uropathy depends on the degree of obstruction, stone burden, renal function, and presence of infection. Endourological interventions such as JJ stent placement or nephrostomy remain the cornerstone of acute management. This report presents a case of bilateral obstructive uropathy managed with bilateral JJ stent placement and long-term conservative treatment, with complete resolution of calculi and renal function recovery after one year.

3. Clinical Case description

a. Patient information / Medical records

A 74-year-old female presented in June 2024 with generalized abdominal pain and decreased urinary output.

Past medical history included:

- Renal lithiasis
- Hypertension
- Type 2 diabetes mellitus (diagnosed 3–4 years prior)
- Obesity
- Laparoscopic cholecystectomy (December 2022)
- Hysterectomy for suspected neoplasia (3 years prior)

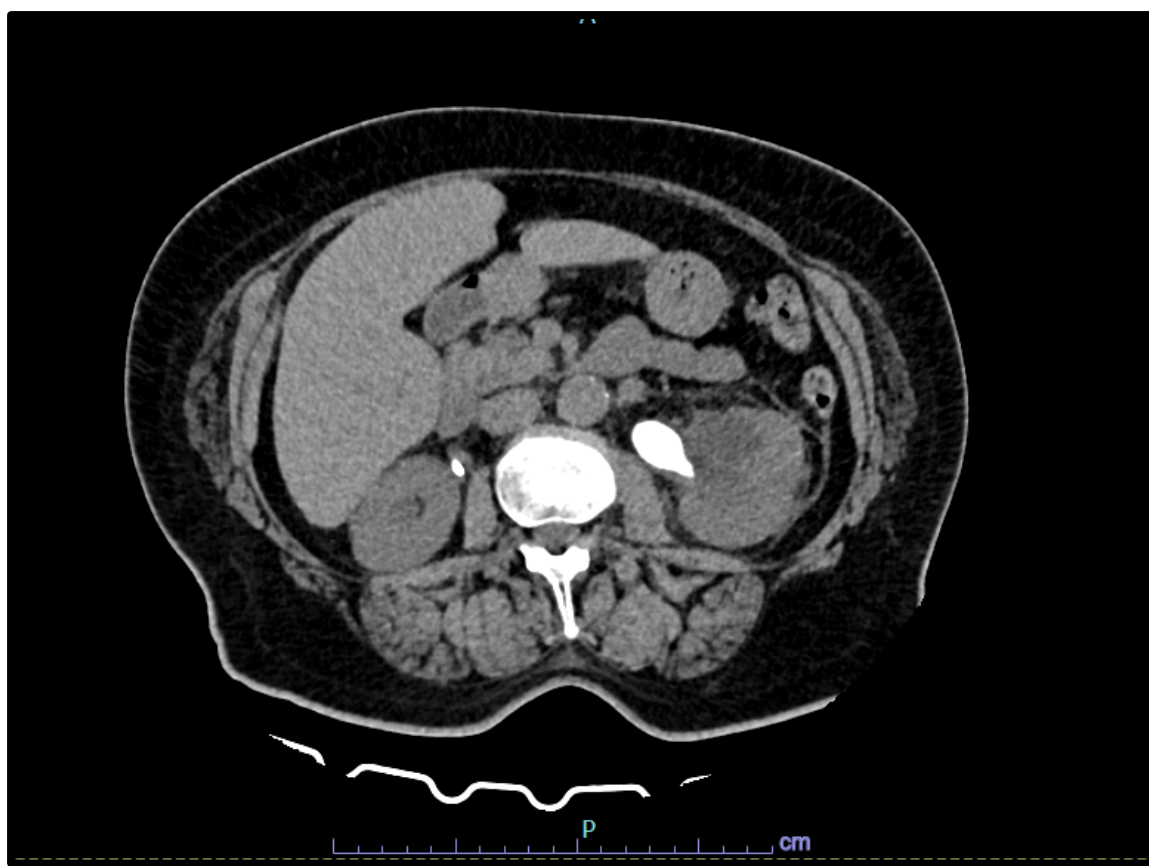
Chronic medication: losartan 50 mg twice daily and lercanidipine 10 mg once daily. No known drug allergies.

b. Diagnostic support studies and results

CT scan (June 2024):

- Bilateral hydronephrosis
- Right: obstructing 5 mm ureteral stone
- Left: 29 × 17 mm pelvic stone occupying the renal pelvis
- Two additional lower calyceal stones (11 mm and 13 mm) on the left kidney

Laboratory tests: Creatinine 10 mg/dL, CRP 153 mg/L, INR 0.98.

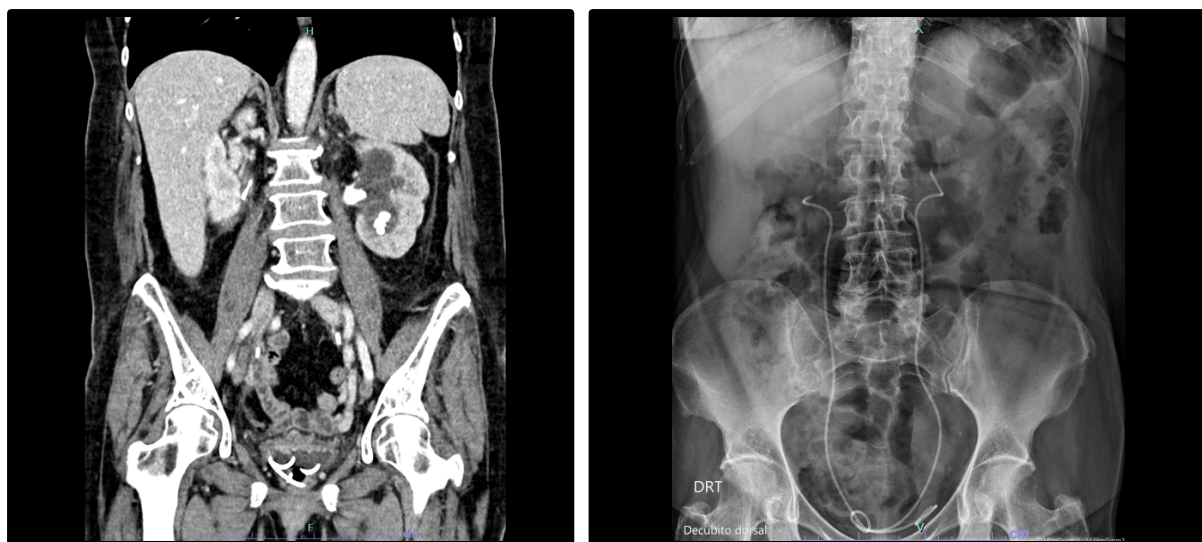


c. Diagnosis

Bilateral obstructive uropathy secondary to renal and ureteral lithiasis.

d. Treatment

On **June 30, 2024**, under general anesthesia, **bilateral JJ stents were placed under fluoroscopic control**, successfully bypassing the obstruction. Urine culture was obtained post-decompression. The patient was discharged with urine alkalinization therapy (LIT-CONTROL).



e. Evolution and progress

Follow-up CT (2025): Resolution of pelvic and ureteral stones.

Laboratory tests (June 2025): Hemoglobin 13.9 g/dL, Creatinine 1.57 mg/dL.





f. Clinical results

June 2025: Bilateral JJ stents removed without complications.

Prescribed continuation of urine alkalinization (LIT-CONTROL) for 3 months, reinforced hydration, and scheduled follow-up with renal ultrasound and labs in one year.

4. Discussion

This case highlights several important aspects:

- **Acute presentation:** Bilateral obstruction with acute renal failure (Cr 10 mg/dL) required urgent decompression.
- **Choice of management:** Bilateral JJ stents under general anesthesia provided immediate relief and avoided the need for percutaneous nephrostomy.
- **Conservative strategy:** Despite the significant stone burden on the left side, conservative treatment with alkalinization and hydration achieved stone clearance over one year.
- **Favorable renal outcome:** The patient's creatinine improved significantly to 1.57 mg/dL after one year, demonstrating the effectiveness of timely intervention.

Comparable cases in the literature support early decompression as the gold standard in bilateral obstructive uropathy (*Rouprêt et al., 2022*). Conservative approaches with alkalinization can be effective in select patients with uric acid or mixed stones (*Türk et al., 2023*).

5. Conclusions and recommendations

Bilateral obstructive uropathy is a urological emergency requiring urgent decompression.

JJ stenting is a safe and effective method when technically feasible.

Conservative strategies, including alkalinization and hydration, can contribute to long-term resolution in selected cases.

Regular follow-up with imaging and renal function monitoring is essential to prevent recurrence and preserve renal function.

6. Bibliographic references (* of special interest, ** of extraordinary interest)

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