Look Beyond the Facets: Obstructing Nephrolithiasis Presenting as Chronic Axial Low Back Pain

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Introduction

- **Chronic axial low back pain** is typically attributed to a spinal source, and a positive diagnostic block tends to confirm that assumption.
- **Extravertebral causes** such as nephrolithiasis can refer pain to the lumbar region but receive little attention in most differentials.
- **We report an obstructing ureteropelvic junction (UPJ) stone** that caused no urologic symptoms.
- **The stone was found alongside concurrent facet arthropathy**, raising the question of which generator was truly responsible for the pain.

Case Summary

- **Patient:**
  - 35-year-old man with obesity and hypertension.
- **History:**
  - Three years of constant midline low back pain after a work-related lifting injury, with bilateral leg radiation and intermittent left leg numbness; denied flank colic, hematuria, dysuria, fever, or prior stones.
- **Prior Treatments (failed/partial response):**
  - Physical therapy, chiropractic care, and prior injections.
- **Exam:**
  - Bilateral facet loading and tenderness, bilateral positive FABER, negative straight leg raise — consistent with facet-mediated pain.
  - Only discordant finding: isolated left costovertebral angle tenderness.
- **Imaging:**
  - Lumbar radiograph showed a left renal radiopacity; CT confirmed a 1.8 × 1.0 × 1.4 cm left ureteropelvic junction calculus with moderate hydronephrosis.

Case Summary, continued

- **Facet Block Response:** Bilateral L4–S1 medial branch blocks (0.5% bupivacaine); ≥80% relief on two occasions, supporting facet-mediated pain; radiofrequency ablation is planned.
- **Urologic Treatment:** Nephroureteral stent placement, then left percutaneous nephrolithotomy with antegrade ureteroscopy and basket extraction.
- **Postoperative Course:** Discharged on postoperative day 1.
- **Follow-up:** Ultrasound at 3 months showed no residual stone or hydronephrosis.
- **Outcome:** Substantial, sustained improvement in back pain, with the patient localizing relief to stone removal.

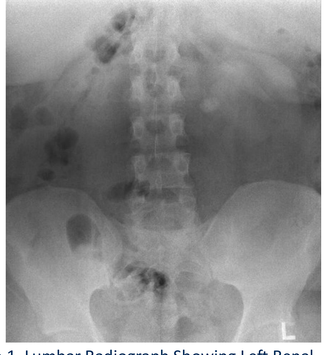


Figure 1. Lumbar Radiograph Showing Left Renal Radiopacity

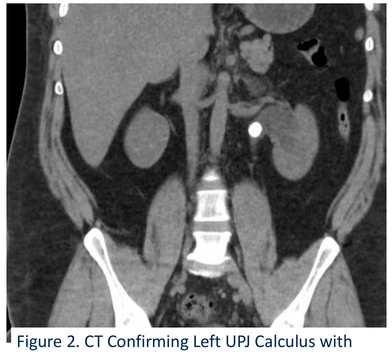


Figure 2. CT Confirming Left UPJ Calculus with Hydronephrosis

Discussion

- **Silent Presentation:** The stone was urologically silent — incidental detection is a recognized presentation of nephrolithiasis, and neither colic nor hematuria was present.[1,2]
- **Confirmation Bias:** Confirming facet pathology does not exclude disease elsewhere; incidental extraspinal findings appear on over a quarter of lumbar studies, most often genitourinary.[3,4]
- **Attribution:** Overlapping treatment precludes causal attribution, though the patient localized improvement to stone removal, consistent with reported benefit after stone clearance.[5]
- **Clinical Takeaway:** Discordant findings — here, isolated costovertebral angle tenderness — warrant reviewing the full imaging field.

Conclusion

- **Incidental nephrolithiasis** can mimic or coexist with facet-mediated back pain despite no urologic symptoms.
- **Confirming one pain generator does not exclude another**
- **Multidisciplinary evaluation** (pain medicine and urology) allowed parallel treatment and durable symptom resolution.

References

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