
UROLOGICAL SURVEY

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STONE DISEASE

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Endoscopic management of completely excluded calices: a single institution experience

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Background and Purpose: Excluded calices refer to a single calix or multiple calices that are completely isolated from the collecting system. The etiology is a result of infection, malignancy, or inflammation that is secondary to endoscopic renal surgery. We report our experience with the endoscopic management of excluded calices.

Patients and Methods: We retrospectively reviewed the data for our patients with a diagnosis of excluded calices. Patients were treated with various endoscopic techniques, all necessitating the formation of a neoinfundibulum. Patients were evaluated for symptomatic and radiographic evidence of resolution.

Results: Eight patients were found to have excluded calices. Seven patients had a history of urolithiasis and previous endoscopic renal surgery. One patient had undergone a laparoscopic partial nephrectomy with a post-operative urinary fistula. Six of eight patients were treated with a percutaneous approach followed by laser incision, balloon dilatation, or nephroureteral stent placement. Two objective failures occurred. One patient received re-treatment and has not demonstrated persistence or recurrence since the second procedure. No complications occurred as a result of endoscopic management.

Conclusion: Excluded calices commonly result from inflammation from previous renal surgery. Goals of management include relief of obstruction, management of stones, and regaining continuity with the remaining collecting system. Successful treatment with endoscopic management involves creation of a neoinfundibulum and placement of a temporary ureteral stent.

Editorial Comment

The excluded calyx is a rare phenomenon - at this specialized tertiary referral center for complex stones, only two cases were seen per year. More commonly one might anticipate the findings of a localized hydrocalyx on CT scan would represent an infundibular stenosis. Retrograde pyelography is essential to differentiate the two entities, as a short infundibular stenosis could be addressed ureteroscopically.

The authors report the use of fluoroscopy to identify the hydrocalyx, yet it is unclear how this was employed if the excluded calyx could not be opacified with retrograde contrast. The authors do not report how they selected patients for a percutaneous versus ureteroscopic approach to creation of the neo-infundibulotomy. One might propose that anterior hydrocalyces may be best suited to a retrograde attempt rather than performing an initial percutaneous puncture into an adjacent posterior calyx and then through the renal pelvis. It also may be that ureteroscopic guidance during percutaneous access might facilitate identification and puncture of the hydrocalyx.

The authors do not report the criteria used for stenting with one versus two ureteral stents, or the size of stent used. In addition scheduled radiographic imaging to document absence of recurrence and/or failure was not reported.

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