

# Outcomes of second-look percutaneous nephrolithotomy in renal calculi-a single centre experience

## Abstract

**Objective:** Percutaneous nephrolithotomy (PCNL) carries significant potential for morbidity. Scant data exists on indications and outcomes of second-look PCNL after a failure to completely clear renal stones at the first attempt. We present our experience with second-look PCNL.

**Material and methods:** This was a retrospective record review of 922 patients who underwent unilateral PCNL at a tertiary care center in South India. Baseline patient, stone characteristics and outcomes were compared between 844 patients undergoing primary PCNL and 78 patients requiring second-look PCNL.

**Results:** Increased stone complexity in terms of Guy stone score (GSS), stone size, staghorn calculi and stones in multiple locations were significantly associated with primary treatment failure ( $p < 0.001$ ). Operative time  $> 75$  min had a significant association with need for second-look PCNL and complications. Initial PCNL was discontinued due to bleeding (28; 35.9%), pelvicalyceal system perforation (3; 3.9%) and purulent urine leading to urosepsis and hemodynamic instability (2; 2.6%). Staged PCNL was done in 44 (56.3%) patients. During second-look PCNL, new access tracts were necessary in majority (42; 53.9%) of the patients and multiple tracts in 20 (25.6%) patients. In second-look PCNL, complications were comparable to primary PCNL ( $p = 0.289$ ).

**Conclusion:** Second-look PCNL should be advocated in patients where the initial PCNL was discontinued due to bleeding, perforation of collecting system, prolonged operative time ( $> 75$  min) and in patients with large stone burden.