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Introduction & Objectives: We aimed to compare the safety and efficacy of different single calyx accesses during percutaneous nephrolithotomy(PCNL), for renal calculi.

Materials & Methods: We retrospectively reviewed patients with renal stones who underwent PCNL with a single calyx access between September 2007 and June 2018. Patients were divided into 3 groups: single upper pole access (group A), single middle access (group B) and the single lower pole access (group C). We compared this three groups in terms of the patients characteristics, stone burden and location, operative data, and postoperative outcomes. Complications were classified according to the modified Clavien system.

Results: During this period, 2660 PCNL procedures were performed, 2026 of which were managed with only single access. The number of patients in group A,B and C were 57, 542 and 1427, respectively. There were no statistically significant differences between this three groups in terms of age, sex and BMI. Evaluation based on the stone localisation Staghorn (9.8%), pelvic (33.2%) and multiple calyx (56.5%) were significantly higher in group B and single calyx (54.4%) location was significantly higher in group A compared to the other groups (Table 1). Mean operative time, scopy time, nephrostomy withdrawal period and hospitalization time were significantly higher in group B. Stone free rate (%76,8) was significantly higher in group C. Total complication rate (60%) was significantly higher in group B (Table 2).

Conclusions: In this study which performed for different calyceal access localizations in PCNL; operation time, scopy time, nephrostomy withdrawal period, hospitalization time and total complication rate were higher in the single middle calyx access group. Staghorn, pelvic and multiple calyx stone localization rates were thought to cause these results.