

Efficacy and safety of percutaneous nephrolithotomy in previously operated (renal stone surgery) children.

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ABSTRACT

Objective: To determine the impact of open pyelolithotomy or nephrolithotomy on the results and complications of subsequent percutaneous nephrolithotomy (PCNL) in children.

Materials and methods: We retrospectively reviewed the files of 121 children with 135 renal units (RUs) who underwent PCNLs procedures between February 2008 and October 2014. We compared RUs with no previous intervention (group I, 87 RUs) with those had preceding open pyelolithotomy or nephrolithotomy (group II, 48 RUs). The demographic characteristics, mean operative time, mean fluoroscopy time, mean hemoglobin changes, number of percutaneous access, analgesic requirement, mean hospitalization time, stone free rate, and complications were all reported and compared.

Results: The study included 135 RUs in 121 children (74 boys and 47 girls) who underwent PCNL. No statistical differences were detected between the two groups in terms of age, gender, stone size, stone laterality and stone opacity. Mean operative time, mean fluoroscopy time, mean hemoglobin change, number of percutaneous access, supracostal access, analgesic requirement, and hospitalization stay were similar in each group (p value > 0.05). The stone free rate in the group I was higher than that in the group II (81.61% vs. 79.17%). However, this was not statistically significant (p value > 0.05).

Conclusion: Previous open pyelolithotomy or nephrolithotomy does not affect the efficacy and morbidity of subsequent percutaneous nephrolithotomy in pediatric patients.