Comparison of outcome of percutaneous nephrolithotomy in terms of operative time, hospital stay, stone clearance and post operative complications in adult versus pediatric patients

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Purpose: To compare the outcome percutaneous nephrolithotomy in terms of operative time, hospital stay, stone clearance and post operative complications in adult versus pediatric patients.

Material and Methods: A retrospective analysis of 155 patients who underwent PCNL from January 2010 – December 2013. The patients were divided into 2 groups: patients having age ≤ 12 years were included in paedriatic group (A) while patients having age > 12 years were included in adult group (B). The patients were analyzed for age, gender, stone size, operative time, stone clearance, hospital stay and Per operative and post operative complications. Data was collected by chart review on specified proforma. SPSS ver16 was used for data analysis.

Results: 129 patients including 44 females and 85 males with a mean age of 45.00 ± 1.44 years were included in adult group while 26 children with mean age of 9.21 ± 5.70 years having 17 (65.4%) male and 9 (34.6 %) females were included in paedriatic group. Mean stone size was 2.21±1.04 cm in paedriatic group compared to 2.68±8.62 cm in adult group (p-value=0.782). Mean operative time in paedriatic group was 158.8± 39.63 minutes compared to in 127.8±5.33 minutes in adult group (p-value=0.007). Mean hospital stay in paedriatic group was 2.84 ±1.14 days compared to in 3.00 ± 1.27 days adult group (p-value= 0.552) . Per operative stone clearance was in paedriatic group was 93.28% ± 9.23% compared to 90.81% ± 12.23% in adult groups (p-value=0.331). There were no significant complications in both groups.

Conclusion: There is no significant difference in outcome percutaneous nephrolithotomy in terms of hospital stay, stone clearance and post operative complications in adult versus pediatric patients. Operative time is significantly shorter in adult cases compared to paedriatic cases.