



# **Randomized Prospective Study Comparing One- Step Vs Serial Dilatation for PCNL Tract: Safety & Efficacy**

Thesis submitted for partial fulfillment of the master degree in  
UROLOGY

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## **Abstract**

**Purpose:** The aim of study was to compare between One- step dilatation and serial metallic dilatation (Alken) for PCNL tract regarding safety and efficacy.

**Patients and Methods:** This randomized comparative prospective study carried out in urology department, Fayoum University during the period between September 2016 till October 2017. A total of 100 patients were enrolled in this prospective study, the patients were randomly distributed, 50 patients for each group: group –1 One-step dilatation using 30 F Amplatz dilator directly over the central Alken , versus group- 2 standard serial dilatation by Alken dilators from 9 to 30 Fr dilators. The total operative time, dilatation time, total x-ray exposure time and x-ray exposure time during dilatation were calculated. The procedure outcome in terms of complications, stone-free rates and hospital stay was evaluated statistically.

**Results:** The PCNL tract was dilated correctly in all cases. The total operative time, dilatation time, total x-ray exposure time and x-ray exposure time during dilatation were significantly lesser in patients underwent One-step dilatation ( $P < 0.05$ ). The stone-free rates were comparable in both groups. The perioperative complications according to the Clavien grading system were comparable in both groups and there was no statistically significant difference between both groups. The post operative hospital stay was lesser in patients underwent One-step dilatation ( $P < 0.05$ )

**Conclusion:** One-step dilatation during PCNL is feasible, with a shorter operative duration time and x-ray exposure.