

Lee K.H.¹, Huang S.K.¹, Chen Z-H.¹, Zeng G.H.²

¹Tainan Chi-Mei Medical Center, Dept. of Surgery, Tainan City, Taiwan, ²The First Affiliated Hospital of Guangzhou Medical University, Dept. of Urology, Guangzhou, China

Introduction & Objectives: To report the initial experience with mini Perc (15~22Fr) to treat renal staghorn stone via single or multiple percutaneous tracts and evaluate the efficacy and learning curve of this technique by a puncture-naive surgeon.

Materials & Methods: From 2018 July to 2019 Feb, 11 patients with renal staghorn stone were treated by mini Perc via single or multiple percutaneous tracts in our hospital. The patient's demographic data (age, stone size and location), perioperative parameters (operative time, number of tracts, stone free rate) and postoperative parameters (hospital stay, complications and auxiliary procedure) were retrospectively reviewed.

Results: Mean patient's age was 57 years (40~73), the average stone size was 4.47 cm (2.8~6.2 cm). A total of 28 percutaneous tract were established in 13 renal units during 13 operations. 6 patients had multiple tract (range 2-5) and 2 patients underwent second-look procedures. The average operating time was 159 mins (range 90~255 mins). The stone free rate at hospital discharge was 69.2%. 1 patient had pseudoaneurysm formation after the procedure and received transarterial embolization. Another patient had a postoperative fever. There were neither patients receiving blood transfusion nor had hydropneumothorax. The average hospital stay was 5.5 days (3~16 days)

Conclusions: With increased experience and appropriate equipments, single or multitract mini Perc is safe, feasible and efficient in treating renal staghorn stone with low surgical morbidity even with a puncture-naive surgeon.