

Percutaneous Nephrolithotomy (PCNL): 10 Years' Experience with 7200 Cases, Report of Results and Complications in Southern Iran

Introduction and Objective: Today PCNL is the modality of choice for treatment of large, complex nephrolithiasis, however such as open surgery, it has complication. We evaluated the result and complications in our training, referral center.

Materials and Methods: Between September 2002 and March 2012, a total of 7494 renal units of the 7236 adult patients, 4121 men, 3115 women, mean age 38.5 year (20-78) and mean stone size 32.6 mm (22-63) underwent PCNL by experienced, training urologists (Fellowships), and residents in two referral centers. We recorded the results and complications of our patients.

Results: Early stone-free rate was 88.5% and after 3 weeks with ancillary procedures (URS, SWL) 94%. Intra and postoperative complications including access failure 87(1.1%), intraop hemorrhage 248(3.3%), transfusion 219 (2.9%), clot retention 31(0.4%), late hematuria in 2-3 weeks postoperative period 98 (1.3%) resulted in 4 nephrectomy and 23 angioembolization, pelvicalyceal perforation 142 (1.8%), conversion to open surgery 24 (0.3%) resulted in 7 nephrectomy and 17 stone removals and kidney repair, suspicious to visceral injury 13(0.1%), fever>38.3 C 223(2.9%), infection 24(0.3%), perinephric collection needed drainage 21(0.26%), pneumo/hydro/hemothorax 39 (0.5%) 8 needed chest tube insertion, hyponatremia (PCNL Sx.) 16 (0.2%), renal failure of normal functioning kidney 14 (0.1%), scapular fracture 1, mortality 13 (0.1%) including sepsis 3, Myocardial infarction 9, unknown 1), re-PCNL for large residual fragment or first access failure 229 (3%). Of course some late complications were managed by referring physicians and may be were not referred/reported to us.

Conclusions: Although PCNL seems the best treatment modality for large renal stones as a less invasive method, minor and major complications should be in the mind of surgeon as in open procedure.