

PP-056

Which factors may effect urinary leakage following percutaneous nephrolithotomy?

A. Dirim, T. Turunc, M.I. Tekin, E. Hasirci, B. Kuzgunbay, A.I. Oguzulgen, H. Ozkardes

Department of Urology, Başkent University School of Medicine, Ankara, Turkey

Objective: To evaluate the factors that may effect urinary leakage following percutaneous nephrolithotomy (PCNL).

Methods: Four hundred and thirty-three patients who underwent PCNL were reviewed retrospectively. The factors that may lead to leakage after surgery were analyzed as categorized into four groups according to individual variables (age, sex, body mass index); renal factors (previous surgery, extracorporeal shock wave lithotripsy history, presence of hydronephrosis); stone burden; and surgical features (access number, type of dilatation, presence of nephrostomy catheter). These data were compared for the presence and duration of urinary leakage.

Results: There was no statistically significant correlation between individual factors and both the presence of leak (POL) and the duration of leak (DOL) ($P>0.05$). Among renal factors, only presence and degree of hydronephrosis was significantly correlated with POL ($P<0.001$) and DOL ($P<0.001$). The mean cumulative stone burden neither had impact on POL nor correlated with DOL ($P>0.05$). Among surgical factors, dilatation with a Nephromax dilator significantly increased incidence of POL when compared with an Amplatz dilator ($P<0.001$), yet did not change DOL. Using an internal ureteral stent significantly decreased incidence of POL and DOL ($P<0.001$). DOL increased with catheter diameter and stay time ($P<0.05$).

Conclusion: Several yet simple factors appear to be effective in postoperative urine leakage from the access sites after percutaneous stone surgery. Precautions may also be simple if these factors are considered preoperatively.

As published in the Supplement of AFJU, Volume 18 (2012), 1st ESD "Experts in Stone Disease" Conference (pages 46-47)