


Turkish Journal of Medical Sciences

Turkish Journal
of
Medical Sciences

Comparison of outcomes of percutaneous nephrolithotomy on patients with normal and malformed kidneys

Ali Fuat ATMACA
Abdullah Erdem CANDAN
Ahmet Tunç ÖZDEMİR
Ege Can ŞEREFOĞLU
Bayram DOĞAN
M. Derya BALBAY

Department of 1st Urology,
Ankara Atatürk Training and
Research Hospital,
Ankara - TURKEY

 [Keywords](#)
 [Authors](#)



medsci@tubitak.gov.tr

[Scientific Journals Home Page](#)

Abstract: Aim: To compare outcomes (stone-free rates, complications) of percutaneous nephrolithotomy (PCNL) in patients with kidney malformations and normal subjects having similar stone characteristics (surface area, configuration). Materials and Methods: Data of 170 patients who underwent PCNL were analyzed. Stone burden was 100-1564 mm², stone configuration was pure pelvic, pure caliceal or complex (pelvic + caliceal) in Group 1 with renal anomalies (n = 18, 19 renal units, 20 sessions). Patients with similar stone characteristics without any renal anomaly comprised Group 2 (n = 152, 158 renal units, 161 sessions). Groups were compared regarding therapy success, outcomes, and complications. Stones ≤ 4 mm were considered as clinically insignificant. Results: Group 1 comprised: 9 horseshoe kidneys, 1 pelvic kidney, 1 ptotic kidney, 1 polycystic kidney, 3 duplex renal system, 2 malrotated kidneys, and 2 with a prior history of open partial nephrectomy. No significant differences were detected in terms of stone-free rates, clinical insignificant residual stone rates, residual stone rates, mean operation times, fluoroscopy times, and complications between the 2 groups (P > 0.05). Although no significant differences were detected regarding pure caliceal and complex stones concerning above parameters between the 2 groups, lower stone-free and higher residual stone rates were detected in Group 1 having pure pelvic stones compared to normal subjects (P = 0.028). Conclusions: PCNL is a safe and effective procedure in patients with kidney malformations. Patients with anomalous kidneys bearing pure pelvic stones might have lower stone-free and higher residual stone rates compared to normal subjects after PCNL in this preliminary study.

Key Words: Complications, kidney malformations, outcomes, percutaneous nephrolithotomy, success rate

Turk J Med Sci 2009; **39**(4): 599-605.

Full text: [pdf](#)

Other articles published in the same issue: [Turk J Med Sci, vol.39,iss.4.](#)