

Immediate postoperative morbidity in patients with indwelling double-J stent versus overnight-externalized ureteral catheter after tubeless percutaneous nephrolithotomy: a prospective, randomized study.

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Abstract

The conventional technique for percutaneous nephrolithotomy (PNL) ends by placing a nephrostomy tube within the access tract. However, feasibility and safety of tubeless PNL have been widely demonstrated. In this modification, a ureteral stent is usually left in place instead of the nephrostomy tube. The aim of this study is to compare the use of a postoperative indwelling double-J stent versus an overnight-externalized ureteral catheter in patients undergoing tubeless PNL. Sixty-eight patients undergoing tubeless PNL were randomized either for a postoperative double-J stent (group 1) or for an overnight-externalized ureteral catheter (group 2). Outcomes evaluated included postoperative pain, hospital stay length, incidence of hemorrhagic complications, residual lithiasis and urinary leakage. Groups were similar according to age, sex, body mass index and stone burden. There were no significant differences in terms of postoperative pain, incidence of perirenal hematomas, residual lithiasis and urinary leakage. However, patients in group 1 presented longer hospital stays (3.7 ± 1.7 vs. 1.9 ± 0.3 days; $p < 0.001$) and greater hematocrit drops (4.9 ± 2.2 vs. 2.1 ± 1.8 %; $p < 0.001$). Our results confirm that among patients undergoing tubeless PNL, both alternatives (i.e. leaving a double-J stent or an overnight-externalized ureteral catheter) are reliable and safe. However, further considerations, like the need of double-J stent removal under cystoscopy, need to be taken into account when deciding which modality to use.