

PERCUTANEOUS NEPHROSTOMY AND DOUBLE PIGTAIL (JJ) URETERAL STENTS AS TEMPORARY METHODS IN SOLVING SUPRAVESICAL OBSTRUCTION CAUSED BY STONE

Ljubomir Dinić¹, Jablan Stanković^{1,2}, Milan Potić¹, Aleksandar Skakić¹,
Marija Mihajlović-Tošić¹, Vladimir Milić³, Natalija Vuković³,
Jelena Kostić⁴, Nataša Đinđić²

Clinic of Urology, Clinical Center Niš, Niš, Serbia¹
University of Niš, Faculty of Medicine, Niš, Serbia²,
Center for Anesthesiology and Reanimation, Clinical Center Niš, Niš, Serbia³
Institute for nephrology and haemodialysis, Clinical Center Niš, Niš, Serbia⁴

Contact: Ljubomir Dinić
Clinic of Urology, Clinical Center Niš, Serbia,
Bul. Zorana Đinđića 48, Niš
E mail: ljubomidinic@gmail.com

Percutaneous nephrostomy and ureteral stenting are temporary treatments for the upper urinary tract obstruction.

The aim of this study was to evaluate the efficacy of these two methods by comparing complications, placement success, urinary symptoms, urine culture analyses prior to derivation placement and derivation removal and success of stone elimination after extracorporeal shock wave lithotripsy (ESWL).

This prospective study included 157 patients with supravvesical obstruction caused by ureteral stones. Eighty-one patients underwent percutaneous nephrostomy, and JJ stent was inserted in seventy-six (76) patients. After resolving the obstruction, ESWL was performed in all patients.

There were no statistically significant differences in success of the urinary derivation placement, the urine culture results before and after placement and success of ESWL treatment between the two studied groups ($p > 0.05$). Urinary symptoms (dysuria, hematuria, urinary urgency, frequent urination during the day) were significantly more present in patients with a JJ stent and this difference was statistically significant for each symptom ($p < 0.001$). Major complications were verified in 2 (2.46%) patients with PCN catheter, and in 7 (9.2%) patients in the group with the JJ stent. Minor complications were significantly more frequent in the group with the JJ stent compared to the group with PCN catheter (28.39% vs 60.52%, $p < 0.001$).

Percutaneous nephrostomy and JJ stenting are optimal methods for temporary treatment of supravvesical obstruction caused by ureteral stones, with similar incidence of the following complications, except for the pain, which dominates in patients with the JJ stent. Urinary symptoms and asymptomatic bacteriuria are more common in patients with the JJ stent. If the ESWL treatment of ureteral stone is performed after urinary derivation placement, we can expect greater success in patients with the JJ stent. *Acta Medica Medianae* 2015;54(3):39-44.

Key words: percutaneous nephrostomy, double pigtail (JJ) ureteral stent, ESWL