



Prone split-leg endoscopic-guided percutaneous nephrolithotomy: the surgeons perspective with A GoPro® view

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ABSTRACT

Introduction: To demonstrate the entire surgeon's point of view of a prone split-leg (PSL) endoscopic guided percutaneous nephrolithotomy (ePCNL) recorded with a GoPro® camera for standardization of the essential technical steps towards a successful procedure (1).

Materials and methods: A 40y.o female patient presented with right flank pain for three years. She had previously been submitted to shock wave lithotripsy without success. Non-contrast computed tomography (NCCT) revealed a 2cm stone in the renal pelvis with 1400HU and stone-to-skin distance of 11cm (Guy's Stone Score 1). PCNL approach was chosen for providing higher chances of stone-free after a single procedure. Informed consent was obtained. The PSL ePCNL was uneventful with a single access in a mid-pole. The surgeon had a Full HD GoPro Hero 4® camera mounted on his head, controlled by the surgical staff with a remote control. All essential surgical steps were recorded.

Results: Operative time was 90 minutes. Hemoglobin drop was 0.7g/dL. The post-operative NCCT scan was stone-free. The patient was discharged 24h after surgery. Kidney stent was left with a string and removed after 5days. The camera worked properly and didn't cause any kind of discomfort to the surgeon. The quality of the recorded movie was excellent.

Conclusion: By recording the surgeon's perspective of an endoscopic urological procedure, we were able to provide a comprehensive understanding of the surgical technique by assembling the endoscopic, fluoroscopic, and operative field views. The GoPro® camera proved to be an interesting tool to document surgical procedures without compromising outcomes and has great potential for educational purposes.

CONFLICT OF INTEREST

None declared.

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