



Laparoscopic – assisted percutaneous nephrolithotomy as an alternative in the treatment of complex renal calculi in patients with retrorenal colon

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INTRODUCTION

Our aim is to demonstrate our technique and describe our experience using laparoscopic-assisted percutaneous nephrolithotomy (LA-PNL) as an alternative in the treatment of large renal calculi when retrorenal colon turns conventional PNL into a high-risk procedure.

MATERIALS AND METHODS

We reviewed our prospective database of PNL in the last 5 years and identified all cases that underwent to LA-PNL. The option for choosing LA-PNL was made by the surgeon on the preoperative consultation based on the colon position on the CT scan. A 3-port laparoscopy was done for colon retrieval. Then, a percutaneous access guided by retrograde pyelography was performed, with direct visualization of the needle and dilators entrance. An ultrasonic device was used for stone fragmentation. A flexible nephroscopy was done at the end of the surgery. A nephrostomy tube was left in place and the trocars were removed.

RESULTS

Nine patients were included in this series. Mean age of patients was 35.2 years. Mean stone largest diameter was 3.7cm. Eight patients were classified as Guy's Stone Score (GSS) 3 in regard of complexity and one patient was considered as GSS 4. Mean operative time was 152.2 min. A stone-free status was achieved in four patients and residual stones were seen in five patients. Mean hospitalization time was 2.41 days. No patient had any kind of peri or post-operative complications.

CONCLUSIONS

Laparoscopic-assisted percutaneous nephrolithotomy is a safe procedure that can be considered when facing complex cases associated with retrorenal colon.

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