Laparoendoscopic Single-Site Surgery (LESS) in Urology: Preliminary Experience in a Single Institution

Introduction and Objective: Laparoendoscopic Single-Site Surgery (LESS) is an emerging endoscopic technique in the world. This paper is to report and assess the feasibility and safety of LESS surgery in urology initially performed at the Department of Urology C, Binh Dan hospital.
Materials and Method: From September 2009 to March 2011, seventy-six patients underwent LESS surgeries at the Department of Urology C of Binh Dan hospital. Patients were placed in the modified nephrolithotomy or supine position. A transumbilical or periumbilical skin incision of 2 cm was made for insertion of 3 standard trocars (2 trocars Storz® 10mm and one trocar Storz® 5mm) or a SILS Port™ of Covidien. Standard and roticular laparoscopic instruments were used for dissection-section during the procedures. At the end of the procedure, the trocars were removed, the specimen retrieved through the umbilicus and a drain placed at the umbilicus. Patients were assessed and data recorded.
Results: There were 45 male and 31 female patients. Mean patient age was 46.8 (range 10 to 86). ASA score: I: 11/76, II: 48/76, III: 17/76. The urological procedures: renal cyst decortication: 21 (Left: 10, Right: 11), parapelvic cyst removal:1, removal of adrenal cyst: 1, orchidopexy for undescending testis: 1, pyeloplasty: 11 (Left: 4, Right: 7), ureterolithotomy: 19 (Left: 13, Right: 6), pyelolithotomy: 4, simple nephrectomy: 13 (Left:5, Right:8), radical nephrectomy: 3 (Left:1, Right: 2), partial nephrectomy: 2 (Right). Mean operating time: 113.2 mins (range 30 to 240). Mean estimated blood loss: 81 mL (range 10 to 700). Drain removal in 3.1 days (range 2 to 4). Postoperative hospital stay: 3.3 days (range 1 to 10). Postoperative complications: fever after nephrectomy: 1; stress ulcer after nephrectomy: 1; bleeding at umbilical site: 2; venous thrombosis of leg: 1; fluid collection at iliac fossa: 1; prolonged urine leakage: 1; UTI: 1; reoperation for hemostasis: 1; conversion to open surgery:1; Perioperative blood transfusion: 1.
Conclusions: Although LESS surgery is just recently applied in urology, our outcomes in LESS urologic procedures are quite encouraging with acceptable rate of complications. Further studies are needed to better define the appropriate role of LESS surgery in urology.