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Is Open Ureterolithotomy Finished? : A Case of Giant Ureteral Stone and Screening of the Literature

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CASE REPORT

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ABSTRACT

INTRODUCTION: Open surgery is an old method of urology in the treatment of ureteral stones.In this case, we aimed to remove 4 stones with a diameter of 22 mm at the lower end of the left ureter by open ureterolithotomy and to report similar cases in the literature.
CASE: The patient who applied to us with the complaint of left flank pain, 4 stones with a diameter of 22 mm in the lower end of the left ureter and grade 4 hydroureteronephrosis. The patient's stones were removed using the left Gibson incision technique, and the ureteral incision area was sutured by placing a 6f double j catheter into the ureter. A drain was placed in the left ureteral tracing and the procedure was terminated by suturing the Gibson incision. The patient's foley catheter was removed on the 1st day and the drain was removed on the 2nd day, and he was discharged. Six weeks later, the patient's 6f double j catheter was removed and the surgical procedure was completed.
DISCUSSION: Ureteral stones usually form in the primary kidney and then descend into the ureter. Ureteral stones are usually single and smaller than 2 cm. For stones larger than 5 cm, the term giant ureteral stone is used. Paik et al. reported a mean blood loss of 144 cc and a mean hospital stay of 6,5 days in seven patients with open ureterolithotomy. In another study, open ureterolithotomy was performed in 56 patients, and 46.4% of the patients had stones in the distalureter. While the hospital stay was 4,2 days, no complications were encountered.
CONCLUSION: Open ureterolithotomy has lost its status as the gold standard with the development of ureterorenoscopy, but as in our case, it is a surgical technique that should be considered in large ureteral stones.
Keywords: *Ureteral stone, ureterolitotomy, ureteral surger*

INTRODUCTION

Open surgery is an old method of urology in the treatment of ureteral stones. With the incision described by Gibson in 1910, many perineal, sacral, transrectal and transvaginal approaches have come to the fore. The development of endoscopic treatments has largely eliminated this need. With the development of new technologies; Indications for open surgery in the treatment of stone disease have decreased to 1-5.4 %(1,3) Although ureterorenoscopy is the gold standard for ureteral stones, open ureterolithotomy in cases of large ureteral stones, unsuccessful extracorporeal shock treatment, additional open surgery planning, ureteral stenosis comes to the fore(4). In this case, we aimed to remove 4 stones with a diameter of 22 mm at the lower end of the left ureter by open ureterolithotomy and to report similar cases in the literature.

CASE: In the direct urinary system X-ray and abdominal computer tomography of the patient who applied to us with the complaint of left flank pain, 4 stones with a diameter of 22 mm in the lower end of the left ureter and grade 4 hydroureteronephrosis in the left ureter and kidney were observed. (Figure 1.)

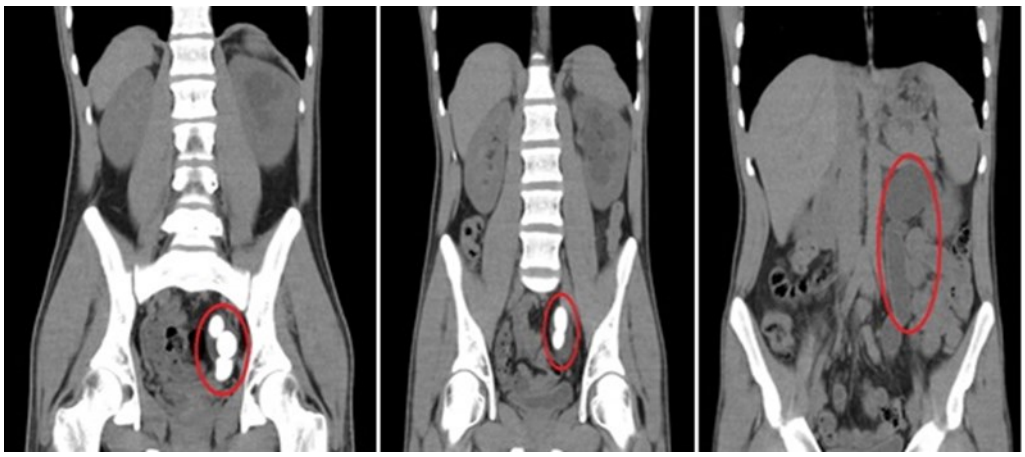

Figure 1.: Tomography images of ureteral stones and hydroureteronephrosis

Left open ureterolithotomy was planned for the patient whose blood, urinalysis and hepatitis markers were normal and and signed informed consent. The patient's stones were removed using the left Gibson incision technique, and the ureteral incision area was sutured by placing a 6f double j catheter into the ureter. A drain was placed in the left ureteral tracing and the procedure was terminated by suturing the Gibson incision. The patient's foley catheter was removed on the 1st day and the drain was removed on the 2nd day, and he was discharged. No postoperative complications were encountered. Six weeks later, the patient's 6f double j catheter was removed and the surgical procedure was completed.

DISCUSSION: Ureteral stones usually form in the primary kidney and then descend into the ureter. Ureteral stones usually pass spontaneously, but spontaneous passage is less in stones larger than 1 cm(5). Primary stones of the ureter are rare. Primary stones are associated with an anomaly such as ureterocele, neoplasm, blind-ended ureter, ectopicureter, and stricture.(6,8). Ureteral stones are usually single and smaller than 2 cm. For stones larger than 5 cm, the term giant ureteral stone is used (9).

Paik et al. reported a mean blood loss of 144 cc and a mean hospital stay of 6.5 days in seven patients with open ureterolithotomy. All patients in the series were stone-free and had no complications(10).

Goel et al. reported the results of open stone surgery in 26 patients. In the study, where the mean stone size was 2.4 cm and the operation time was 98.8 minutes, it was reported that intraoperative complications occurred in 10 patients, and ureteral stenosis developed in one patient after three months of follow-up(11).

In another study, it was reported that 46.4% of 56 patients who underwent open ureterolithotomy had distal ureter stones.While the hospitalization period of the patients was 4.2 days, no complications were reported (12).

CONCLUSION: Open ureterolithotomy has lost its status as the gold standard with the development of ureterorenoscopy, but as in our case, it is a surgical technique that should be considered in large ureteral stones. In case of failure in endoscopic methods, it prevents laparoscopic and robotic methods with its low cost and high stone-free rate.

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