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Management of symptomatic ureteric stumps laparoscopically:

AM Khan, S. Jacob
Department of Surgery, King George Hospital, Ilford Essex IG1 2HL, UK

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Abstract

Aim: To study the advantage of excision of the distal symptomatic ureteric stumps with the retroperitoneal laparoscopic approach. **Methods:** Four patients who had failed to settle their symptoms with the initial conservative management were included in the study. All underwent excision of the distal symptomatic ureteric stumps with the retroperitoneal laparoscopic approach and then received prophylactic antibiotics. **Results:** We have achieved better results than those reported in the literature in terms of operating time (mean 1 h 45 min), blood loss (< 10 ml), postoperative recovery (within 12 hr) and hospital stay (< 48 hr). **Conclusion:** Retroperitoneal laparoscopic excision is a safe, simple and effective method in the management of symptomatic ureteric stumps. (*Asian J Androl 2001 Jun*; 2:)

1 Introduction

Leaving the ureteric stump behind after surgical removal of the kidneys is a common practise. Complications may occur in the retained distal ureteric segment after nephrectomies. The debate to treat or not to treat redundant distal ureteric stumps continues[1-5]. Different modes of treatment options have been employed with varying results. These include from conservative treatment to operative management. While there is no consensus on the treatment, secondary excision of the distal ureter is commonly performed for tumours, recurrent infection from refluxing or obstructive stumps, or stones in the stump.

Herein we report our preliminary experience in treating symptomatic distal ureteric stumps with retroperitoneal laparoscopic approach. Extensive search of the literature has shown that though the laparoscopic approach has been used extensively in the management of different urological conditions, it has not been applied to the treatment of distal symptomatic ureteric stumps.

Corrspondence to: Dr. AM Khan, 96-Lowbrook Rd, Ilford Essex IG1 2HJ, UK.
Tel: +44-7944 957 016
fax: +44-208 514 7010
e-mail: dramirkhan@hotmail.com
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2 Materials and methods

2.1 *Patients*

Four patients were included in the study. All had failed to settle their symptoms with the initial conservative management. Firstly a 28-year-old Caucasian patient presented with recurrent attacks of urinary tract infection and right loin pain for 2 years. Past history included a right nephrectomy for a reflux nephropathy 18 years ago.

THe second patient was a 33-year-old Caucasian who had recurrent infection in left ureteric stump, on and off for the last 4 years since being treated with a left nephrectomy for a reflux nephropathy. A micturating

cystogram confirmed a refluxing redundant ureter in both the later cases. The third patient was a 55-year-old Caucasian who had recurrent episodes of right loin pain since being treated with a right nephrectomy, off and on for the last 2 years.

The fourth patient, a 56 year old Caucasian who underwent a right nephrectomy 5 years ago for renal stones, presented to us with recurrent attacks of urinary tract infection and right loin pain, on and off for 2 years. A plain radiograph showed a calculus in the retained right ureteric stump (Figure 1).

2.2 *Surgery*

The procedure is performed with the patient in the supine position. A small transverse incision is made 3 cm medial and above the anterior superior iliac spine. The abdominal muscles are then incised and retracted down to reach the peritoneum. The peritoneum after its identification is pushed medially with a lahey's swab. Care is taken not to puncture the peritoneum. A balloon dissector is inserted and inflated to approx. 30 insufflations. An extra peritoneal space is thus created.

After deflation of the balloon the origin trocar is inserted and the balloon inflated with saline to hold the trocar in place. Two further ports, a 10 mm port is inserted 5 cm below and another 5 mm port inserted 5 cm above the Mcburneys point. The bladder is filled with sterile saline via a Foleys catheter, which is then clamped.

The iliac arteries are taken as land marks over which the ureteric stump is identified. The ureter is dissected free along its entire course. The lower end of ureteric stump close to the bladder is carefully dissected and a cone of bladder is pulled up. An endo-loop (Ethicon) is introduced through a 10 mm port and is passed through the ureter up to the cone of bladder. The endo-loop is tightened around the cone of bladder. A second endo-loop is inserted and tightened close to the first one. It is ensured that continuous traction is applied to the cone of bladder during this manoeuvre. The stump is then excised distal to the second ligature and retrieved through the 10 mm port.

Haemostasis is secured and a redivac drain inserted. The Foleys catheter is left in for 24 hours postoperatively. At the end of the procedure, the abdomen is desufflated and all ports and instruments are withdrawn and the port sites closed with nylon skin stitches. All patients are given i.v. 1.5 gm cefuroxime during the operation.

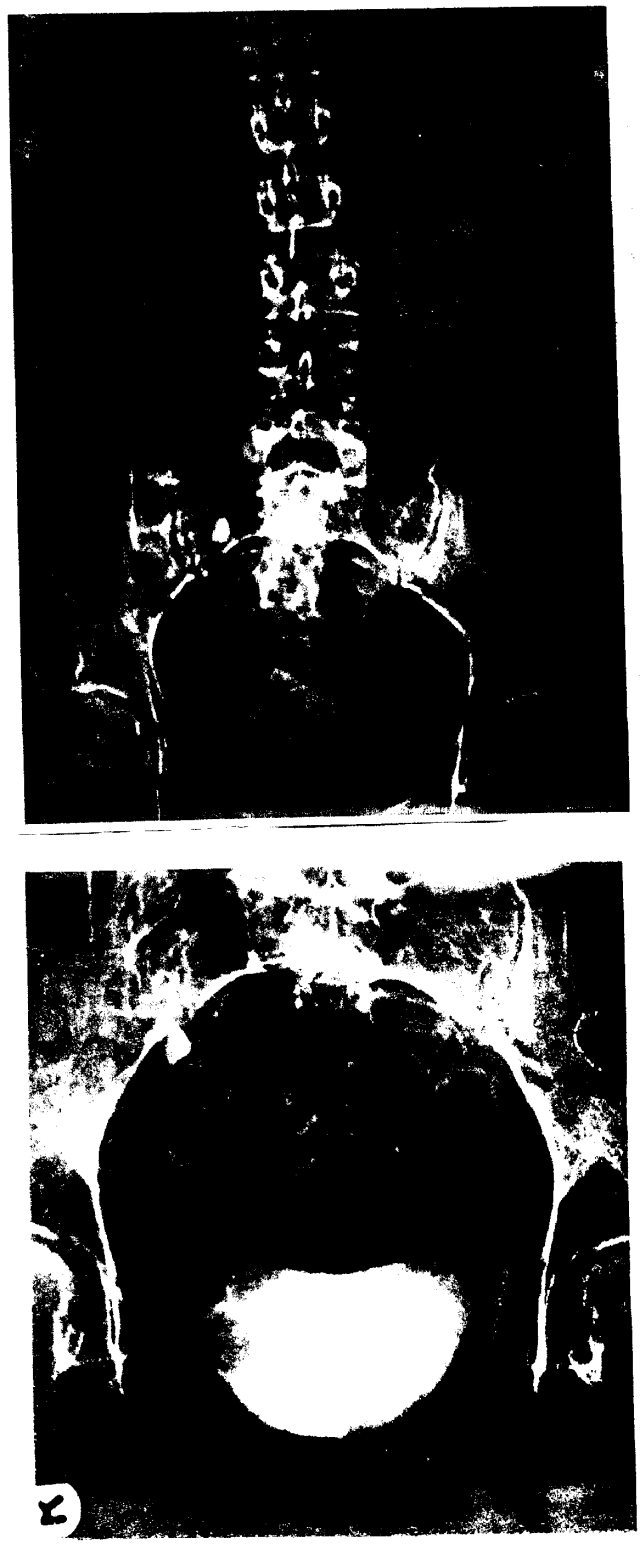

Figure 1. A: a plain radiograph, showing a calculus in the retained right ureteric stump; B: an enlarged view of the same ureteric calculus.

3 Results

The mean operative time in our group of patient was 1 hour and 45 minutes. Minimum blood loss was noticed in all cases (< 10 ml). All patients made an uneventful postoperative recovery, started oral intake within 12 hours and were discharged within 48 hours after surgery. Their wound sites healed up nicely without any complications. They had return to their normal activities within 3 weeks.

Histological examination confirmed the presence of a chronically inflamed ureteric stump. All patients have remained asymptomatic to date.

4 Discussion

The treatment for symptomatic ureteric stumps varies from conservative management to active surgical intervention. Advocates for conservative treatment suggest that complications of the retained distal ureteric stumps are scarce and that a second incision with added morbidity should be avoided [1]. They also argue that the ureter retains its peristaltic activity, which improves drainage and prevents urinary stasis[2].

However many studies have established that ureteric stumps may cause recurrent infection and is a potential site of complications[3-5], hence should be treated. Wickham *et al*, initiated the first therapeutic retroperitoneoscopy in the treatment of ureteric stones in 1978[6]. In 1990 Clayman *et al*, performed the first clinical laparoscopic nephrectomy[7]. Gaur described the first experience of a ballon to expand the retroperitoneal space and then went on to describe many successful procedures laparoscopically with this technique[8,9].

In 1993, Chandhoke *et al* described the first attempt to perform total ureterctomy for ureter cancer with a combined cystoscopic and laparoscopic technique in 3 patients[10]. Since then many different operation have been devised to treat symptomatic distal ureteric stumps including electofulgration[11], PTFE Teflon[12] and fibrin[13] injection into the ureteric lumen. The results have been variable.

The mean operative time in this group is 1 hr and 40 min. This is satisfactory and may be due to the relative simplicity of the procedure as compared to the open technique. We expect the operating time to be shortened even further after we acquire more expertise and skill in of this technique[14].

The retroperitoneal approach seems to be more advantageous in regard to the safety, the amount of blood loss, the duration of postoperative recovery and wound healing, the time for resuming normal food intake, the requirment for postoperative analgesia, the time for hospitalization and the problem of intra – abdominal contamination as compared with the open technique[15-18].

5 Conclusion

Symptomatic distal ureteric stumps may be problematic in terms of their clinical presentation and management. The authors excised them by the retroperitoneal laparoscopic technique. This approach is a safe, simple and effective way in the management of symptomatic ureteric stumps.

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