The Advantages of Bilateral Simultaneous Stone Removal from the Upper Urinary Tract

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An anterior transperitoneal approach was used to remove the stones from both kidneys and/or ureters simultaneously in 18 patients. The morbidity of this type of surgery in our study was very low and there were no surgical difficulties in exposing the intrarenal structures. Furthermore, especially in secondary cases, this approach was easier and more time-saving than the classical flank approach. We recommend its use at least in selected groups of patients in whom peritoneal gross contamination is not expected.

Introduction

It has been thought for years that the anterior approach to the upper urinary tract for simultaneous bilateral operations has some advantages over the classical flank approach, but the method has not been used widely [1]. Recently, however, there have been papers reporting on anterior transperitoneal approach in the treatment of bilateral obstruction at the ureteropelvic junction [2].

Bilateral renal and/or ureteral stone removal was performed simultaneously on 36 kidneys and ureters of 18 patients, in 1979 to 1980 at Hacettepe University Medical Center.

Materials and methods

In the years 1979 to 1980, 18 patients suffering from bilateral upper urinary tract calculi had undergone simultaneous operation by the anterior transperitoneal approach.

There were 9 males and 9 females, aged 5–58 years (mean 27.6 years).

In all cases midline vertical incision above the umbilicus was used. After abdominal exploration the ipsilateral colon was mobilized from its posterior peritoneal attachments and retracted medially. On the right side the duodenum was mobilized to expose the anterior surface of the kidney. When stone removal was complete, which could be controlled by a portable X-ray unit, the incision was closed with 4–0 chromic catgut and pendrose drains were placed in the retroperitoneal area and brought through a stab wound. The posterior peritoneum was
closed carefully to extraperitonealize the drain site. The nephrostomy or ureterostomy tube was inserted extraperitoneally just like the drains, when it was indicated.

Most of the patients had a single calculus to be operated, but 5 patients had multiple renal stones to be removed.

In 7 cases simultaneous bilateral pyelolithotomy was performed while in 7 other patients suffering from upper ureteral calculi bilateral ureterolithotomy was performed simultaneously. The remaining 4 patients underwent unilateral ureterolithotomy with contralateral pyelolithotomy, which were performed simultaneously. Three patients had been operated on previously by the classical flank approach for calculus disease.

**Results**

Hospitalization ranged between 7 and 16 days postoperatively (average of 9.1 days). Stone removal was complete except for 1 case in which it passed uneventfully on the twentieth postoperative day.

There was a transient peritoneal irritation due to urine leakage, which subsided spontaneously in 2 days. Prolonged urine drainage occurred in only 1 patient and ceased without the need of ureteral catheterization. Although most of the patients had positive urine cultures preoperatively we did not observe any wound infection.

There were no operative deaths except for one patient who died on the sixteenth postoperative day because of sepsis.