

POSTER SESSION MP3 WEDNESDAY, NOVEMBER 3

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PRACTICE TRENDS IN THE MANAGEMENT URETEROPELVIC JUNCTION OBSTRUCTION IN ADULTS: RESULTS OF A GLOBAL SURVEY.

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Introduction :

The treatment of adult ureteropelvic junction obstruction (UPJO) has undergone a tremendous change since the first introduction of percutaneous endopyelotomy in the mid 1980's. Various endoscopic and laparoscopic techniques currently offer success rates comparable to the traditional open surgery, while minimizing patient morbidity. In this study, we measured the global impact of the growing popularity of minimally invasive techniques in the management of UPJO in adults.

Method :

A questionnaire pertaining to both past and present management of adult UPJO was sent via e-mail to 6485 urologists world-wide who were registered members of the American Urological Association. The survey included questions intended to capture regional differences in practice patterns and management characteristics among both academic and private urologists.

Result :

A total of 642 (10%) urologists responded to the survey, including 426 private and 216 academic urologists. Among the 642 respondents, 364 (57%) were from the US, while the remaining 278 represented urologists practicing in 5 different continents. Laparoscopic pyeloplasty was routinely offered by 88% of academic (vs. 47% private) urologists in the US, compared to 74% of those practicing outside of the US. Number of factors, including fellowship training in endourology, involvement in resident teaching, and the number of cases UPJO encountered in one's practice, correlated with the overall likelihood of offering laparoscopic surgery as a potential treatment option. Majority of respondents (65%) reported a major shift in their management algorithm for adult UPJO; in 40% of the cases, this transition occurred in a 3 year period between 1999 and 2001. Compared to both private urologists and those who practice abroad, academic urologists in the US were more likely to offer laparoscopic pyeloplasty as the preferred treatment, especially when confronted with crossing vessels and severe hydronephrosis.

Conclusion :

Minimally invasive surgical techniques have gained world-wide acceptance as treatment of choice for adult UPJO.

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LAPAROSCOPIC PYELOPLASTY: THE WASHINGTON UNIVERSITY EXPERIENCE

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Introduction :

One of the newest options for treatment of ureteropelvic junction obstruction (UPJ) is laparoscopic pyeloplasty. Laparoscopic pyeloplasty is increasingly being used as a first line of treatment of UPJ obstruction. We retrospectively reviewed our experience with laparoscopic pyeloplasty.

Method :

A retrospective chart review of patients undergoing laparoscopic pyeloplasty between 1996 and 2004 was performed. Operative parameters, recovery, and efficacy data were collected.

Result :

Fifty-two laparoscopic pyeloplasties were performed in this period. There were 26 (51%) primary, 22 (43%) secondary and 3(6%) tertiary procedures. The average EBL was 141 cc (range 20-3100). The average OR time was 285 (range 119-495) minutes (255 minutes for laparoscopy and 32 minutes for cystoscopy and stent placement). The mean hospital stay was 2.4 days (range 1-7). Success, as defined by an unobstructed renal scan, was achieved in 28/36 (78%) equivocal renal scans were found in 6/36 (17%) of patients. In two cases further surgical intervention was required (3.7%). There was one intraoperative complication requiring (1.9%) conversion to an open procedure and a blood transfusion. There were 7 (13%) post-operative complications including urine leaks (3.8%), abdominal pain (3.8%), respiratory failure (1.9%), failure of stent to drain requiring percutaneous nephrostomy placement (1.9%), and corneal abrasion (1.9%).

Conclusion :

Laparoscopic pyeloplasty is a safe and effective method of treating UPJ obstruction. We experienced a failure rate of about 4% which is comparable to other laparoscopic and open series. Laparoscopic pyeloplasty is a safe effective method for treating UPJ obstructions.

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LAPAROSCOPIC PYELOPLASTY: THE UNIVERSITY OF WASHINGTON EXPERIENCE

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Introduction :

Laparoscopic pyeloplasty has been recently introduced to the urologist's armamentarium as a minimally invasive method in the management of ureteropelvic junction (UPJ) obstruction. We report the University of Washington experience with this method and analyze our results.

Method :

Data on 36 consecutive patients who underwent 37 laparoscopic pyeloplasties was retrospectively evaluated. A transperitoneal approach using 4 ports was used in all, except for one retroperitoneal procedure. Operative success was defined as absence of obstruction on renogram and resolution of symptoms, and failure as the necessity of a second procedure in the presence of an obstructive pattern in renogram.

Result :

Eight patients (22%) had failed prior endopyelotomy. A crossing vessel was identified in 22 (59%) at surgery. The technique used was dismembered pyeloplasty in 34, fenderplasty in 2, and Y-V plasty in 1. Median operative time was 4.5 hours, blood loss 75 cc., hospital stay 2.5 days, and follow-up 21 months. One patient required conversion to an open procedure due to a 3 cm stricture, and 2 were lost to follow-up resulting in 34 procedures for analysis. The overall success rate was 91% with 3 patients requiring a second procedure for recurrent stricture. Two failures were salvaged endoscopically, and another with open pyeloplasty. Two of three failures occurred within the first 3 procedures, reflecting the learning curve. Excluding the first 3 patients, a success rate of 97% (30/31) was accomplished. Of the patients who had undergone previous endopyelotomy, the success rate was 100%. Complications occurred in 4 patients. One patient required laparoscopically revision of the anastomosis on post-op. day 4 due to ureteral twisting, an obstructed stent was changed in one patient on post-op. day 1, and cardiac arrhythmia controlled with medication developed in 2 patients.

Conclusion :

Laparoscopic pyeloplasty is safe and offers a similar success rate as open pyeloplasty once the learning curve is mastered. It is successful after failed endoscopic procedures and results in less morbidity for the patient. We believe that laparoscopic pyeloplasty should replace open pyeloplasty as the new gold standard for the treatment of UPJ obstruction.

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OUR EXPERIENCE WITH LAPAROSCOPIC PYELOPLASTY FOR THE TREATMENT OF URETEROPELVIC JUNCTION OBSTRUCTION

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Introduction :

Laparoscopic dismembered pyeloplasty has been quoted to have equivalent success rates to the traditional open procedure. The aim of this study was to report our experience and compare the retroperitoneal and transperitoneal approaches in adults.

Method :

All patients presenting with UPJO between 1994 and 2004 were entered into a database to record patient, operative and post-operative details. All retroperitoneal and transperitoneal laparoscopic pyeloplasty procedures were analysed and compared to determine whether the approach had any effect on operative success rates.

Result :

A total of 127 procedures were performed for UPJO at our tertiary referral centre. Of these, 63 were dismembered laparoscopic pyeloplasties and so were included in this analysis. Two patients had bilateral procedures, therefore 61 adults (male 28, female 33) were included. Fifteen underwent retroperitoneal and 48 underwent transperitoneal laparoscopic pyeloplasty. Seven patients had had previous surgery. The retroperitoneal group had a mean follow up of 22 months (range 4-42). Five of these patients (33%) developed recurrent symptoms with evidence of obstruction seen on the renogram within 4 months (mean 3.3) and required further surgery. Within the transperitoneal group, 11 patients had not attended for follow up yet and so were excluded from further analysis. The remaining patients had a mean follow up of 9.5 months (range 2-25). Two patients were classified as failures at 3 months follow up resulting in a success rate of 95% for the transperitoneal route compared with 67% for the retroperitoneal group ($p = 0.02$).

Conclusion :

Currently all procedures are performed via the transperitoneal route as the retroperitoneal approach was associated with a lower success rate. There are several potential explanations for this; the first 15 cases were the first pyeloplasties performed, the transperitoneal route is more familiar and none of the anastomoses in the retroperitoneal group were transposed to the other side of any crossing vessels.