Evaluation of the Results of Laparoscopic pyeloplasty in The Treatment of Ureteropelvic Junction Obstruction

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OBJECTIVE: In the treatment of ureteropelvic junction obstruction (UPJO), laparoscopic dismembered pyeloplasty and open pyeloplasty have been shown to have similar outcomes. We present our experience with laparoscopic dismembered pyeloplasty (LDP).

METHODS: A retrospective review of all adult LDP procedures was performed at our institution between November 2002 and July 2005. Preoperative evaluation included an abdominal CT angiogram to assess for crossing vessels and a diuretic renal scan to quantify the degree of obstruction. Follow-up with diuretic renal scan and patient pain analogue scale was performed at 3, 6, and 12 months after surgery. If the study is normal at 12 months then the patient is followed with ultrasonography of the kidneys and bladder looking for ureteral jets. The absence of ureteral jets, worsening of the hydronephrosis or patient complaint of pain then necessitates repeat diuretic renography.

RESULTS: Eighteen LDP were performed on 7 men and 11 women. (Follow up was available for all patients) with an average age of 35 ± 16 and average follow up of 11 months. Mean operative time was 230 ± 124 minutes and estimated blood loss was 61 ± 40 ml. Average length of hospitalization and post-operative analgesia required was 2±1 days and 19±12 mg morphine sulfate equivalents. The overall success rate was 89% based on a normal diuretic renogram and lack of pain using a validated pain scale. There were no major complications.

CONCLUSION: In this study, LP resulted in a durable success rate of 89% in patients with PUJO over a mean follow up of 11 months. These results were comparable to those from open pyeloplasty, but with less morbidity. Based on our experience and that of others, LP is gaining acceptance as the new standard for patients with PUJO, especially if there are crossing vessels.

Key Words: laparoscopy, ureteral obstruction, ureteropelvic junction obstruction