

#2006 - Laparoscopic-assisted Extracorporeal Pyeloplasty: A minimally invasive approach to pediatric ureteropelvic junction obstruction

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Background: Ureteropelvic Junction Obstruction (UPJO) is a common congenital anomaly in pediatrics that may require surgical intervention which may perform by open, laparoscopic-assisted, laparoscopic or robotic-assisted fashion. Laparoscopic pyeloplasty may not be applicable due to instrument or skill limitations. Laparoscopic-assisted pyeloplasty could be the first step towards a minimally invasive approach to UPJO in pediatrics.

Materials and Methods: sixty infants with UPJO were enrolled in this study and treated with either laparoscopic-assisted extracorporeal or open pyeloplasty. In MIS approach, the ureteropelvic junction was exposed and released laparoscopically and pulled out of the abdominal cavity and pyeloplasty was done simply over a JJ stent. The second group was treated by conventional open pyeloplasty. All patients were followed after the operation at least for six months and the results were compared between two groups.

Results: Comparison of the pelvic anteroposterior diameter before and after the operation indicated a significant reduction after the operation in both groups. Diuretic scan

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after JJ catheter removal didn't show signs of obstruction in almost all cases among both groups. Comparison of the postoperative complications revealed no significant differences between the two groups. The complication rate was also very low and almost the same in both groups.

Conclusion: Laparoscopic uretero-pelvic anastomosis demands advanced surgical skills and fine instruments which made it time-consuming and less applicable widely. Laparoscopic-assisted pyeloplasty as a minimally invasive surgery is more applicable and showed acceptable results in our study. We suggest this approach as the first step toward MIS for UPJO in pediatrics.

Keywords: Pediatrics; Ureteral Obstruction; Pyeloplasty; Laparoscopy

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