Comparative study between mini-laparoscopic and conventional laparoscopic instruments for treatment of ureteropelvic junction obstruction

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Objective: To evaluate safety, clinical efficacy and cosmetic results after pyeloplasty using mini-laparoscopic instruments (MLP) compared with standard laparoscopic pyeloplasty (SLP) in patients with ureteropelvic junction obstruction (UPJO).

Method: From September 2011 to September 2014, 29 extroperitoneal MLPs were performed, while 22 extroperitoneal SLPs were conducted in patients with UPJO in our hospitals. The data of two groups were reviewed and studied.

Result: Operations of two groups were successful without conversion to open surgery. There was no difference in operative duration, blood loss, duration of indwelling catheter, time for starting normal diet or perioperative complications between two groups (P>0.05). However, the average postoperative hospital stay, postoperative analgesics required and the pain numerical rating scale (NRS) at first postoperative day were less or lower in group MLP than that in group SLP (p<0.05). Mean follow-up time was 23 (range, 6-36) months. The value of anteroposterior pelvic diameter on ultrasound within each group decreased significantly (p<0.05), but were similar between the two groups one year after surgery (P>0.05). The GFRs of impaired split renal function in both groups significantly elevated, whereas there was no significant difference in mean value of GFR between the two groups one year postoperatively [MLP: (45±18) ml/min vs. SLP: (47±16) ml/min, P>0.05]. The questionnaires showed that patients in group MLP were significantly more satisfied with their cosmetic result.

Conclusion: Our initial experience may suggest that pyeloplasty using MLP instruments provide similar therapeutic effects but better minimal invasion and cosmetic satisfaction than pyeloplasty using SLP instruments.

Biography
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