

# A Prospective Randomized Controlled Trial Compares Open Pyeloplasty and Laparoscopic Pyeloplasty for Ureteropelvic Junction Obstruction (UPJO): Subjective Outcome

SRINIVAS K.K., UPPIN I.V., NERLE R.B.

## ABSTRACT

**Background:** A study was conducted at the KLES hospital and MRC, Belgaum, for a period of 1 year from April 2004 to March 2005.

**Objectives:** To compare the efficacy of open pyeloplasty and laparoscopic pyeloplasty in the treatment of primary ureteropelvic junction obstruction with regards to the subjective outcome.

**Materials and Methods:** A total of 30 patients of congenital UPJO was evaluated and operated. All the 30 patients were randomized into two groups of 15 each. One group formed the open pyeloplasty group and the other formed the laparoscopic pyeloplasty group. All the patients were assessed for the subjective outcome post-operatively and all the patients were followed up for a minimum of 3 months. The results were analyzed by using the Student's paired and unpaired tests

**Results:** The mean age group, the laterality of involvement of the kidney and the sex ratio were almost similar between the two groups. The pre-operative pain and the activity levels were almost similar and comparable between the 2 groups. But, there was a significant post-operative improvement in the pain and the activity level in each group. In our study, we found that the improvement in the pain and the activity level post-operatively

was much better in the laparoscopic pyeloplasty group patients as compared to those in the open pyeloplasty group patients. The time period when oral feeds were started and the drain was removed, was slightly more in the laparoscopic group, owing to the transperitoneal approach. There was no conversion to open procedure done in any of laparoscopic cases. The post-operative cosmesis was better in the laparoscopic pyeloplasty patients as compared to the open pyeloplasty patients.

**Conclusion:** Our study was done on a small number of patients and the post-operative follow up was only for 3 months. It is difficult to draw conclusions from such a study. Hence, a large randomised controlled trial with a long period of follow up studies are needed to establish the role of laparoscopic pyeloplasty in the treatment of UPJ obstruction. The potential advantages of laparoscopic pyeloplasty over open pyeloplasty are decreased post-operative pain, a shorter period of hospitalisation, a short convalescence and improved cosmesis. Laparoscopic pyeloplasty is a technically challenging procedure and it is still in its infancy. It is being practised at only few medical centres around the world. With the recent technological advances, laparoscopic pyeloplasty has become a valid alternative to endoscopic pyelotomy and open pyeloplasty.

**Key Words:** Urology, Urosurgery, PUJ