

Robotic-assisted laparoscopic pyeloplasty for the treatment of ureteropelvic junction obstruction - how should success be determined?

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Background

Ureteropelvic junction obstruction (UPJO) is described by a narrowing of the ureteral lumen below the renal pelvis. At Haukeland University Hospital, robotic pyeloplasty (RP) for UPJO has been performed since 2014. The aim of the study was to evaluate the results of the treatment.

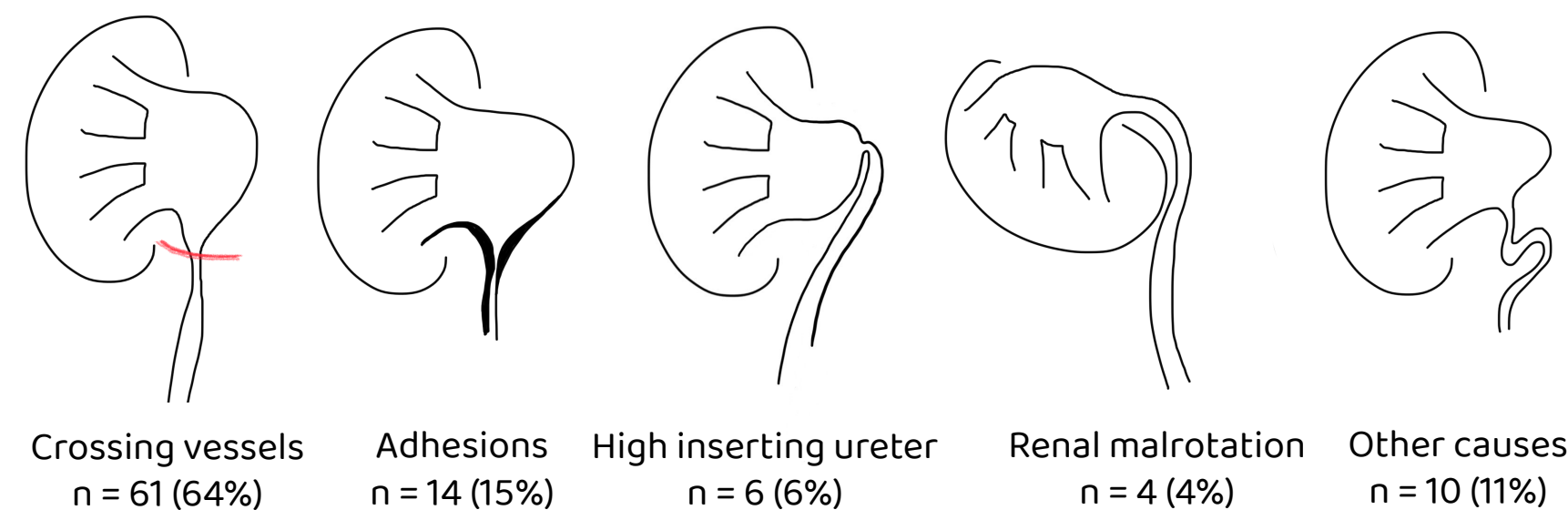
Materials and methods

Retrospective review was performed of patients undergoing RP between 2014 and 2022. Outcomes of interest included symptom relief, complication rates and renographic findings at follow-up.

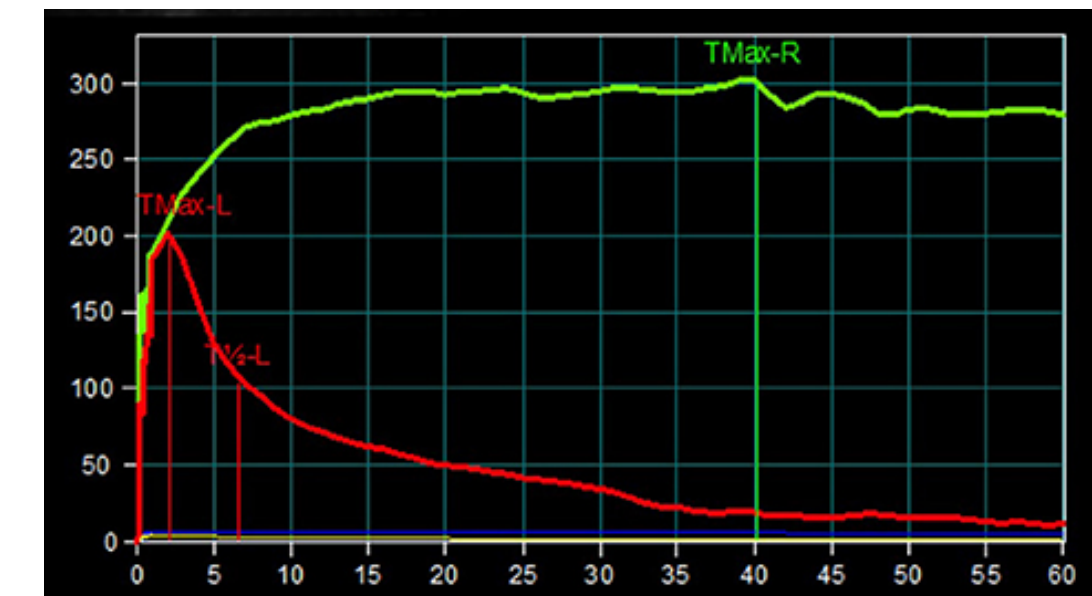
Results

In total, 95 RP procedures were performed in 54 women and 41 men, with a mean age of 40 yrs (IQR: 21 – 58). Flank pain was the most frequent symptom (n = 81, 85%) followed by infection (n = 33, 35%). More than one cause indicating surgery was present in 34% of patients. Urodynamic relevant obstruction on renography was found in 62 patients (65%) preoperatively.

Causes of UPJO found at surgery



Mean operative time was 123 minutes (range 60 – 270). Two patients experienced minor perioperative complications. At 3 months follow-up, 91% of the patients had symptom relief and no obstruction on renography was registered in 65%. To note, there was no significant association between improvement in symptoms after surgery and renography findings at follow-up, p = 0.57.



Conclusion

RP is a safe procedure with high success rate in terms of symptom relief and low perioperative complication rate. There was no association between renography finding and relief in symptoms at follow-up. Success after surgery should therefore depend more on symptom relief rather than renography findings.