

Závěr: Roboticky asistovaná pyeloplastika je efektivní minimálně invazivní metoda pro korekci obstrukce pelvi-ureterálního přechodu. Obvykle je spojena s dlouhodobým vyřešením obstrukce u většiny operovaných pacientů.

KLÍČOVÁ SLOVA

Roboticky-asistovaná, pyeloplastika, obstrukce, pelvi-uretrální přechod, hydronefróza.

SUMMARY

Študent V ml., Hartmann I, Šarapatka J, Študent V. Robot-assisted dismembered pyeloplasty for ureteropelvic junction obstruction.

Introduction: In this video we present our experience with robot-assisted pyeloplasty (RAP). Our first experience with laparoscopic pyeloplasty dates back to 2006. RAP brings several subjective advantages such as 3D vision and greater dexterity of laparoscopic instruments, which facilitates especially the reconstruction phase of the surgery.

Material: Between March 2014 and August 2018, we performed 50 RAPs. The first 47 cases were done using 2nd generation DaVinci® S™ system. Now we work with 4th generation DaVinci® Xi™ system. Using the transperitoneal approach we start with open access for the 30° laparoscope. We use four 8mm trocars for robotic arms and one 12mm trocar for the assistant. In some patients we use transmesocolic approach. The ureter is then identified and traced cranially towards the kidney. The renal pelvis is exposed to enable dismembered pyeloplasty. We either resect the stenotic part of the proximal ureter or we place the ureter ventrally to the crossing vessels (if present). In case of large hydronephrosis the renal pelvis can be resected. Reconstruction is usually done using 6–0 Monocryl™ suture. In all patients we use the DJ stent, which is kept in place for 4 weeks. We do not always place a drain next to the kidney (ERAS principle), only in case of largely resected pelvis or inflammatory changes of surrounding tissues. The surgery is done in a standard general anaesthesia with commonly used postoperative analgesics. Ultrasound of the kidneys (US) in 2 and 9 months

after surgery, diuretic scintigraphy one year post operatively and subsequent US every 6–12 months is done during the follow up.

Presented case: A 29-year-old female patient was diagnosed with a right hydronephrotic kidney. The CT showed a primary hydronephrosis with no stone and significant delay in contrast excretion during the excretory phase, the cortical renal scan showed 47% split renal function of the affected kidney. Pre-stenting was done for significant loin pain. We performed transmesocolic RAP. We found accessory crossing vessels during the surgery. The renal pelvis was not resected and the anastomosis was done mostly using 6–0 Monocryl™ suture. The DJ stent was placed for 4 weeks. The console time was 93 minutes and there were no intra- and peri-operative complications.

Results: Twenty-five women and 25 men with mean age 50 (median 31) were included. Right-sided pyeloplasty was done in 58% of patients. Pre-stenting was done in 38% of patients. Pain was the presenting symptom in 70% patients and recurrent UTI was present in 14% of patients. Mean console time was 88 min (36–153) and blood loss was in all patients negligible. Crossing vessels were found in 66% of patients. There were no intraoperative complications in this group. Postoperative complications were present in 4 cases (three Clavien II and one Clavien IIIb). The most serious complication was bleeding from a trokar incision that required surgical intervention. Mean follow up time was 15.3 months. The success rate (relief of symptoms, improvement of obstruction seen on scintigraphy, therefore no need for subsequent surgery) was 98% of cases.

Conclusion: Robot-assisted pyeloplasty is an effective minimally invasive method for correction of ureteropelvic junction obstruction. It is usually associated with lasting resolution of obstruction in most of the patients

KEY WORDS

Robot-assisted, pyeloplasty, obstruction, ureteropelvic junction, hydronephrosis.

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