PE66 Robotic intracorporeal Studer orthotopic neobladder: 1-year functional results

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Introduction & Objectives: Robot-assisted cystectomy with complete intracorporeal reconstruction (iRARC) is an emerging procedure with encouraging long-term oncologic results. However urodynamic and functional data of patients undergoing iRARC are still limited. In this study, we describe the short-term functional and urodynamic results of the modified Studer neobladder after iRARC.

Materials & Methods: We retrospectively assessed 12 consecutive male patients who underwent iRARC with Studer neobladder between November 2015 and November 2017. Besides other regular follow-up consultations all patients were seen approximately 1 year after iRARC with Studer neobladder for a urodynamic evaluation (cystomanometry, urethral pressure profilometry and pressure flow study with measurement of postvoid residual). Furthermore data on continence and quality of life were obtained by questionnaires (ICIQ, EORTC-BLM30 and other). Clinical and laboratory data were collected from our prospective registry. The study protocol was approved by local ethics board and all patients provided informed consent. For statistical analysis, we used descriptive statistics and Wilcoxon test to compare creatinine levels. Metric variables are displayed in median and range.

Results: Median follow-up time in this series was 11 (7-16) months after iRARC. All patients were socially continent (1pad) at daytime. At night 5/12 (42%) needed no pads, 4/12 (33%) needed 1 pad and 3/12 (25%) needed >1 pad. Median Pouch capacity was 404 (253-670) ml with a median postvoid residual volume of 0 (0 -30) ml. Maximal Flow Rate (Qmax) was at a median of 19.6 (7.3 -43.2) ml per second. The median value of the maximal urethral pressure was at 71 (38-100) cmH_2O with a median functional length of 30 (20-76) mm. 2/12 (17%) patients had been treated for urinary tract infection in the postoperative interval. Venous blood gas analysis showed a pH-value of 7.38 (7.27-7.41) and base excess of 0.05 (-6.6-4.4). At follow up, two patients required bicarbonate substitution due to metabolic acidosis, no patient had ureteral stenting nor nephrostomy. Serum creatinine showed no significant alteration (p=0.37) and remained stable from preoperative level of 82 (70-146) µmol/l to follow up level of 83 (69-200) µmol/l. 12/12 (100%) patients stated in the questionnaire they would choose the same type of urinary diversion again.

Conclusions: Robotic intracorporeal Studer orthotopic neobladder so far provides promising functional and urodynamic results after one year. Metabolism remains well compensated and infection rates are tolerable. Patient acceptance of robotic intracorporal orthotopic neobladder is high. Nevertheless, long-term function needs to be observed to confirm best functional results in comparison to open bladder reconstruction.