underwent PCSC, meanwhile 24 underwent CRC. Inclusion criteria for PSCS were patients' high motivation to preserve sexual function, no tumor involvement of bladder neck, minimal risk of prostate cancer (PSA lower than 2.5 ng/ml and no abnormalities on TRUS). After retroperitoneal mobilization of the urinary bladder, prostate capsule was incised horizontally and "adenomectomy" performed by means of Millen's technique. For urinary diversion in both groups we used modified Hautmann pouch with chimneys for direct ureteral implantation.
**Results:** We followed patients for 8 to 30 months. The disease recurrence, urinary continence and erectile function were assessed. 3 out 8 PCSC group patients had high risk non-muscle invasive bladder tumor and five pT2 tumors. In CRC group 20 patients had an organ-confined (pT1-pT2 stages) disease, however 4 patients had a non-organ confined (pT3). No recurrence was reported in PCSC group. In CRC group no local recurrence was observed, but systemic progression was detected in two (8.5%) cases. Concerning functional results after 3 months of surgery 7 (8.5%) and 18 (75%) patients reported day-time continence in PCSC and CRC groups respectively ($p < 0.7$). Inability of voiding was reported in two cases in CRC group. Erectile function enough for intercourse was recovered in 5 (62.5%) and 4 (16.5%) patients in the PCSC and CRC groups respectively ($p < 0.02$)
**Conclusions:** PCSC is feasible operation and appropriate indication for well-selected group of patients. Early oncological and functional results are excellent.

## GUA-39 Choice of the method of draining the urinary tract in residual stones after percutaneous nephrolithomy in children

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**Background:** To date, percutaneous nephrolithotomy (PCNLT) is the method of choice in patients with urolithiasis. This method has proven to be completely safe and effective in treating children with nephrolithiasis. However, in some cases, for various reasons, it is not possible using the endoscopic method to completely rid the patient of calculi located in the kidney cavities. The presence of residual stones does not allow removal of nephrostomy drainage, which is the cause of nasocomial infection. The aim of the study was to evaluate the treatment of children with residual stones in the pyelocaliceal system after PCNLT, depending on the method of decompression of the upper urinary tract.
**Methods:** The retrospectively evaluated results of treatment of 46 patients aged 4 to 16 years who underwent PCNLT for coral and multiple stones from 2012 to 2018. Stones of the pyelocaliceal system were revealed using multispiral computed tomography. The average stone size was 2.9 ± 0.3 cm.
**Results:** According to ultrasonography and survey urography, residual stones were detected in 12 (26%) children. Patients were divided into two groups: A – drainage of the kidney cavities was carried out using nephrostomy drainage established during PCNLT (n = 8); B – upper urinary tract decompression was performed using an internal ureteral stent (n = 4). The average size of the residual stones was 1.4 ± 0.2 cm, they were located in the calyces. All patients underwent extracorporeal shock wave lithotripsy. In group A, the stone fragments completely receded within 30.4 ± 6.7 days. During this period, three patients were forced to re-establish nephrostoma due to obstruction of the ureter with fragments of stones and exacerbation of pyelonephritis. Pyuria and bacteriuria persisted in all patients, which required the use of antibiotics for a long period of time. In group B, the state of stone free was detected at 15.8 ± 3.6 days after distance lithotripsy. In no case was an exacerbation of a urinary tract infection. Minor pyuria is easily eliminated by the use of uroseptics. Moreover, the child felt quite comfortable, easily walked and behaved actively.
**Conclusions:** In the presence of clinically significant residual stones after PCNLT, it is advisable to use the internal ureteral stent for decompression of the upper urinary tract, preventing them from moving to the supravesical section, which avoids various complications. Moreover, in order to rid the patient of residual fragments, extracorporeal shock wave lithotripsy can be used at any time after surgery.

## GUA-40 Extracorporeal shock-wave lithotripsy for renal colic in children

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**Background:** As a rule, stones resided in ureter, are a cause of acute supravesical obstruction which leads to a renal colic and troubles children very much, demanding its urgent removal. At the same time various complications are developing, including depression of the renal function and exacerbation of urinary tract infection that may be a cause of sepsis. At present there is no generally accepted opinion in the respect of optimal method of treatment in acute ureteral obstruction in pediatric patients; moreover, we did not find literature with the results of extracorporeal shock wave lithotripsy (ESWL) use.
**Methods:** From January 2015 to November 2018, ESWL was performed on an emergency basis to 124 children with renal colic which could not be treated with non-steroidal anti-inflammatory drugs or recurred repeatedly during 24 hours. Mean age was 9.5 ± 1.6; 83 were boys and 41 girls. Intravenous urography was done only in the cases when there were doubts in stone size and level of its situation according to the plain urography. Before ESWL children's parents were informed about the method and its complications and possible manipulations in the urinary tract if necessary (ureteral stenting, endoscopic removal of stone fragments) or repeated lithotripsy.
**Results:** Ambulant help was rendered to 21 patients, 103 patients were hospitalized for 1 day. Stone size more than 10 mm (mean size 14.2 ± 0.8 mm) was revealed in 48 patients. In 76 cases maximum stone size was less than 10 mm (mean size 6.3 ± 0.6 mm). Stones were situated in the projection of pelvic, iliac and lumbar ureter in 81 (66%), 15 (12%) and 28 (23%), correspondingly. The better results were shown by patients with the stones resided in the pelvic (including intramural) ureter. In 87% of the cases a size of the stones was less than 10 mm. Stone fragments began to pass during the first two days after ESWL and 69 patients were stone free to the end of the second day. The remaining 12 patients became stone free during 4 days after lithotripsy. When stones were situated in the mid or upper part of the ureter, they passed completely only in 9 patients and to the end of the 5th day in 6 children. As a rule, those children had stones of the size more than 10 mm (n = 38). They became stone free completely to the end of the seventh day of follow-up. There were no any significant complications after ESWL.
**Conclusion:** Emergency ESWL is the most optimal method of treatment in urethral stones and allows to deliver a child from suffering in short terms. The advantages are available: there is no need in long-term treatment with anti-inflammatory drugs and protracted hospitalization. Choice of treatment should be co-ordinate with a patient's parents who must have at their disposal a complete and reliable information of advantages and shortcomings of any low-invasive method and its possible complications.