MP23-18

RETROSPECTIVE COMPARATIVE ANALYSIS OF REUSABLE AND DISPOSABLE FLEXIBLE URETEROSCOPES: RESULTS FROM FLEXIBLE URETEROSCOPY OUTCOME REGISTRY (FLEXOR)

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INTRODUCTION AND OBJECTIVE: Our retrospective cohort of 6669 patients enrolled in the FLEXOR registry was analysed with a primary objective of comparing outcomes of use of disposable and reusable flexible ureteroscopes. Secondary objective of the study was to study the stone free rate and complications in both the groups.

METHODS: It was a multicentric retrospective study of patients who underwent flexible ureteroscopy (FURS) from January 2018 to August 2021. Patient less than 18 years, ureteral stones and patients with musculoskeletal abnormalities were excluded. Kolmogorov-Smirnov test was used to check data distribution for normality. Continuous data presented as mean and standard deviation and categorical data as absolute numbers and percentages. Univariable logistic regression analysis was performed to evaluate factors for SFR from PSM population. Multivariable assessment done and estimated as odds ratio (OR) and 95% confidence interval (CI), and p-value.

RESULTS: There were 4808(72.1%) patients in the reusable group (Group 1) and 1855 (27.8%) patients in disposable group (group 2). Both the groups were demographically matched. The patients at baseline in the reusable groups were significantly more symptomatic i.e had pain, fever , deranged renal function and culture proven UTI.The mean stone size and stone burden was more in the disposable group (9.62±6.61 vs 11.84±8.59 mm, p≤0.001). As far as the stones > 2 cm are concerned they were statistically more in the disposable group (3.97% vs 10.84%, p≤0.001). Lower polar stones were also proportionately more in the disposable group (43.03% vs 47.06%, p≤0.001). The stone density was also more in the disposable group (967.58±332.14 Vs 1005.48±334.07 , p≤0.001). Operative time was longer in the disposable arm (78.37±43.84 vs 57.67±43.84 min, p≤0.001). Significantly more usage of Holmium laser and TFL was noticed in the reusable group (83.67%) and reusable group respectively.Hospital stay was remarkably less in the disposable group (2.52±2.99 vs 3.96±3.54, p≤0.001) and the residual fragments were statistically more in the reusable group(25.17% vs 21.78% p≤0.001). On Multivariate analysis Disposable scopes were associated with lesser residual fragments.

CONCLUSIONS: Disposable scopes are safe and effective and provide better stone free rates. They are more likely to be used in large burden and lower polar stones.

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MP23-19

LESSONS LEARNT FROM A MULTICENTER SERIES OF 400 CASES ON THE UTILITY OF PRE-STENTING FOR PEDIATRIC RETROGRADE INTRA RENAL SURGERY (RIRS)

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INTRODUCTION AND OBJECTIVE: Retrograde intrarenal surgery (RIRS) is an option for pediatric kidney stone upto 1 cm in EAU guidelines and many urologist do RIRS for >1 cm stones as well if they have sufficient experience. We aim to assess the outcomes of pre-stenting versus non-pre-stenting in a pediatric population undergoing RIRS for intrarenal stones in different age groups and locations.

METHODS: Data collected on Children/adolescents with kidney stones undergoing RIRS in 9 centers between 2015-2020 were retrospectively reviewed. Exclusion criteria: ureteral lithotripsy, bilateral procedures. Stone-free status was evaluated at 3-month and deemed as a single residual fragment (RF) ≤2 mm/absence of multiple fragments. Patients were divided into two groups (Group 1 no pre-stenting , Group 2 pre-stented). Student's, Chi-square and Fisher's exact test was used to assess difference between groups. Univariable and multivariable logistic regression analysis were performed to predict RF. Statistical signicance: p-value <0.05.

RESULTS: 389 children/adolescents were included (192 patients in Group 1). Pre-stented patients were younger compared with non-presented (mean age 8.30±4.93 vs 10.43±4.30 years, p<0.001). There were no differences in stone characteristics (number, size, locations). Lasing and total surgical time were similar. Urinary tract infections (Clavien grade 2) were more prevalent in Group 2 (10.7%) compared to Group 1 (3.7%, p=0.016). Sepsis (Clavien grade 4) occurred in 2.1% of patients in Group 2 and no patient in Group 1 (p=0.146). 30.7% patients in Group 1 and 26.4% in Group 2 had RF (p=0.322). Multivariate logistic regression analysis showed that stone size was associated with RF (OR 1.20 95% CI 1.08-1.36, p=0.001).

CONCLUSIONS: RIRS showed similar stone-free rate in pre and non-pre-stented children/adolescents, In this multicenter study, we found that preoperative positioning of ureteral stent had no effect in clearing stones but a higher incidence of postoperative infections. Whilst routine pre-stenting cannot be recommended it becomes imperative that the child's guardian is counseled appropriately about pros and cons of prestenting including need for additional anaesthesia.

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A SINGLE CENTER COMPARATIVE STUDY OF TWO SINGLE USE DIGITAL FLEXIBLE URETEROSCOPY IN THE MANAGEMENT OF RENAL STONES LESS THAN 2 CM

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INTRODUCTION AND OBJECTIVE: For renal stones <2 cm, guidelines recommend the use of retrograde intrarenal surgery as a first line treatment option. Many available single use flexible ureteroscopy were found. We aim to compare the effectiveness of two single use flexible ureteroscopy; Pusen uscope 3011 versus LithoVue in the management of renal stones less than 2 cm.

METHODS: Our study prospectively included 60 patients equally divided in to 2 groups; Pusen group and LithoVue group during the period from June 2020 to June 2021. The included patients were above 18 years old. Perioperative details as operative time, fluoroscopy time, hospital stay and complications were recorded. Stone free rate was assessed. Base purchase cost was also compared.

RESULTS: There was no statistically significant difference between the 2 groups regarding age, gender and body mass index (BMI), stones size, side, number and location. The perioperative evaluation and outcome had no statistically significant differences between the 2 groups regarding the operative time, hospital stay, access sheath use, and stone free rate or radiation exposure. Among all cases we had 49 cases (81.6%) with no postoperative complications (21 cases for Pusen group and 28 cases for Lithovue group). The incidence of postoperative complications was significantly higher among Pusen group than lithoVue group (p=0.02). Initial purchase cost for both FURS had no significant difference (p=0.86).

CONCLUSIONS: RIRS can be performed effectively with Pusen 3011 and LithoVue single use flexible ureteroscopy in patients diagnosed with renal calculi <2 cm with superior outcomes with LithoVue.