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MP67-14 LOSS OF FLEXIBLE URETEROSCOPE FLEXION IS ASSOCIATED WITH INCREASED REPAIR RATES: A PROSPECTIVE MULTI-CENTER STUDY

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urine were collected for fecal fat (gas chromatography) and urine metabolites (assay spectrophotometry) respectively. Unidirectional fluxes of oxalate were measured across isolated, short-circuited distal colon and compared between groups.

RESULTS: Dramatic differences in fecal fat content were noted between RYGB and SHAM on normal and high fat diets (Table 1). Likewise, urinary oxalate excretion rose markedly in RYGB animals when dietary fat and oxalate content were increased. Colonic oxalate permeability and tissue conductance by flux were comparable between RYGB and SHAM on high fat diet but not on normal fat diet. Judging by the development of hyperoxaluria, colonic oxalate bioavailability increases between 200 and 500 mg/24 hour fecal fat.

CONCLUSIONS: In our RYGB model, oxalate solubility was promoted by steatorrhea and resultant enhanced passive oxalate absorption. Contrary to the current dogma, oxalate permeability in the colon was similar in both RYGB and SHAM animals on high fat feeding. Based on this, all patients with hyperoxaluria, not just those with enteric causes, should be counseled to reduce dietary fat content.

Table 1. Urinary oxalate excretion and fecal fat content in SHAM and RYGB rats, varying fat and oxalate content.

Dietary Oxalate	SHAM				RYGB			
	No Oxalate Added	1.5% Potassium Oxalate	10% Fat	40% Fat	No Oxalate Added	1.5% Potassium Oxalate	10% Fat	40% Fat
Dietary Fat	10% Fat	40% Fat	10% Fat	40% Fat	10% Fat	40% Fat	10% Fat	40% Fat
Urinary oxalate μMoles/24 h	3.4 ± 0.5	3.9 ± 0.4	4.1 ± 0.4	5.0 ± 0.5	5.8 ± 0.8	7.1 ± 0.7*	13.6 ± 1.2	21.3 ± 2.2*
Fecal fat mg/24 h	16 ± 5	143 ± 96*	12 ± 4	218 ± 185*	524 ± 265	1464 ± 480*	632 ± 347	1484 ± 589*

* statistically significant difference (p < 0.05) between 10% and 40% fat groups

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MP67-14
LOSS OF FLEXIBLE URETEROSCOPE FLEXION IS ASSOCIATED WITH INCREASED REPAIR RATES: A PROSPECTIVE MULTI-CENTER STUDY

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INTRODUCTION AND OBJECTIVES: Flexible ureteroscopy is increasingly performed to treat various conditions in the upper urinary tract. It is an effective treatment but one factor that may affect scope durability that has never been examined before is loss of tip flexion after each usage. The goal of this study was to examine loss of scope flexion for flexible ureteroscopes and whether this was associated with increased scope repair rates.

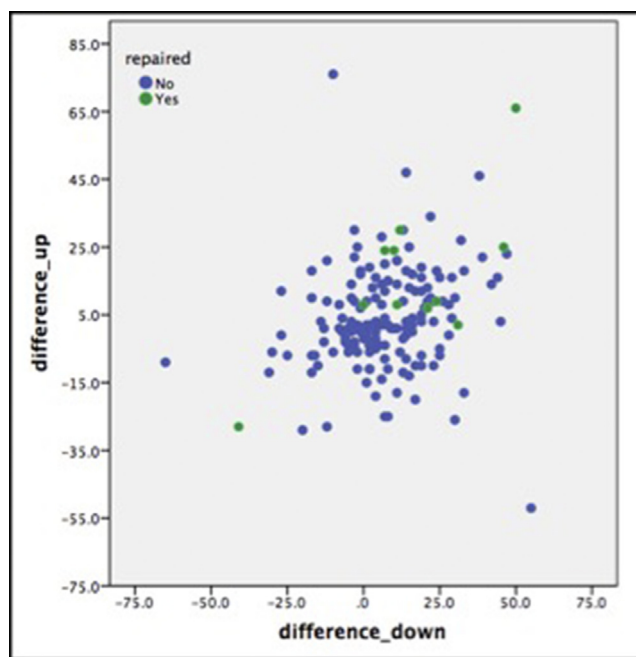
METHODS: The Western Endourology STone (WEST) research consortium is comprised of six high volume stone treatment centers. Flexible ureteroscope cases performed between August 2014 and April 2015 at these institutions comprised the study cohort. Patient demographic data, details regarding upper urinary tract pathology treated in each case, ureteroscope performance and intraoperative data were recorded prospectively. Photographs of each ureteroscope at maximal upward and downward flexion at the start and end of every case were acquired to measure loss of flexion. Multivariate regression analyses were subsequently used to identify factors affecting this parameter.

RESULTS: 383 flexible ureteroscopic procedures were performed during the study period. Male to female ratio was 1.3:1 with an average patient BMI of 30.7kg/m2. Stone removal was the indication for treatment in 295 (79.7%) cases with lower pole (36.8%) as the most common location followed by upper pole (21.9%) and middle kidney (21.7%).

Loss of scope upward flexion was found in 203 cases (53.0%) with an average loss of 15.6±18.7 degrees. Loss of downward flexion was found in 218 cases (56.9%) with an average loss of 16.0±13.0 degrees.

Loss of flexion in either direction was associated with the scope being sent for repair at the end of each case (figure 1). With multivariate analysis, the amount of time the scope was used in the patient body and patient BMI were statistically significantly correlated with loss of downward deflection (R = 0.160, p < 0.05 and R = 0.177, p < 0.05, respectively).

CONCLUSIONS: Loss of scope flexion is frequently observed after flexible ureteroscope use and is associated with subsequent instrument repair. Increased duration of scope use in the patient body and patient BMI are predictive of increased loss of downward scope flexion. These factors should be considered to improve the lifespan of flexible ureteroscopes.



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MP67-15
DIFFERENT ROLES OF M1/M2 MACROPHAGE PHENOTYPE FOR RENAL CRYSTAL FORMATION

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INTRODUCTION AND OBJECTIVES: We previously reported on the involvement of renal macrophages (Mφ) with both crystal formation and elimination in hyperoxaluric mice. Mφs have two phenotypes: inflammatory (M1) and anti-inflammatory (M2). Furthermore, our recent study showed colony-stimulating factor-1 (CSF-1)-deficient mice, which barely had M2Mφ, developed greater amounts of renal crystal deposits than wild-type mice. Hence, we focused on the different abilities of Mφ phenotypes and investigated the M1/M2 roles for crystal development using in vitro and in vivo studies.

METHODS: 1) In the in vitro study, we differentiated M1 and M2 from bone-derived Mφ (BMM). Fluorescently labeled COM crystals were incubated with BMM, M1, or M2 only as well as each Mφ co-cultured with renal tubular cell (RTC) for 6 h. The phagocytic ability of each Mφ and attachment amount on RTC for crystals were examined.