Plenary Session 14: Resident Prize Essay Podium Session

RPE4

Does Tumor Volume Assessed by Cumulative Cancer Location Predict Grade Reclassification on Active Surveillance in the MRI Era?

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Introduction and Objective: Cumulative cancer location (CCLO) has previously been shown to be associated with grade reclassification (GR) during active surveillance (AS) in men without prostate MRI (Erickson et al, Eur Urol Onc 2018). Given the variability in interpreting metrics such as number of positive cores and maximum percentage of cancer in a core, we aimed to determine the ability of CCLO to predict GR in the MRI era.

Methods: We identified patients enrolled in AS between 2011 and 2021 with Grade Group (GG) 1 disease who underwent prostate MRI. We developed an "MRI-CCLO" (mCCLO) score by summing the total number of uniquely involved sextants positive for cancer on both diagnostic and confirmatory biopsy, with an additional point for an MRI with at least one PI-RADS >2 lesion. Men were stratified into low (1-2) and high (>3) mCCLO risk groups. The primary outcome was GR to >GG2 on subsequent biopsies. Kaplan-Meier analysis was used to compare GR rates between mCCLO risk groups. Using multivariable analyses, we compared performance of a base model (age, confirmatory biopsy year, race, PSA density, and highest PI-RADS score) with the base model plus either mCCLO, number of positive cores, or maximum percentage of cancer in a core.

Results: Among a total of 310 patients, the high mCCLO group had significantly higher rates of GR compared to the low mCCLO group (Figure). Each model had comparable discriminative ability (c-indices, 95% CI: mCCLO [0.68, 0.63-0.74], number of positive cores [0.68, 0.63-0.73], maximum percentage of cancer in a core [0.67, 0.61-0.72], base model [0.66, 0.60-0.72]).

Conclusions: The mCCLO score is comparable to traditional biopsy metrics in predicting GR but may offer greater reproducibility and less variability in interpretation.

RPE3

Classic Bladder Exstrophy Closure without Osteotomy or Immobilization: An Exercise in Futility?

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Introduction and Objective: The outcome of primary closure in classic bladder exstrophy (CBE) plays a pivotal role in a patient's eventual continence. The key factor regarding a closure's success has long been established as a properly stabilized pelvic ring. The authors

sought to review the outcomes of bladder exstrophy closure without the use of osteotomy or lower extremity/pelvic immobilization.

Methods: A prospectively maintained institutionally approved exstrophy-epispadias complex database of 1490 patients was reviewed for patients with CBE who had undergone closure without osteotomy nor immobilization. All patients were referred to the author's institution either due to failed closure or for further reconstructive care.

Results: Of a total of 1016 CBE patients, 56 closure events were identified that met inclusion with a total of 47 unique patients. 38 closures were completed prior to 1990 (67.9%). 45 closure events developed eventual failure (45/56, 80.4%) (Table 1). 13 closure events were secondary closures (13/56, 23.2%). The primary closure failure rate was 83.7% (36/43) while the secondary closure failure rate was 69.2% (9/13). Failures were attributed to dehiscence, bladder prolapse, and vesicocutaneous fistula (25/45, 55.6%) (23/45, 51.1%) (6/45, 13.3%) respectively. 37 patients developed social continence (37/47, 78.7%), while only 8 patients developed spontaneous voided continence (7/47,17.0%) (Table 2). The most common methods of voiding were continent catheterizable channels (25/47, 53.2%) of which all were socially continent.

Conclusions: These results illustrate the critical role osteotomy and post-operative immobilization play in both primary and secondary exstrophy closure. While this is a historical case series, the authors believe that the utility of osteotomy and post-operative immobilization has been previously cemented within the literature. Therefore, surgeons should prioritize using these tools whenever possible.

Moderated Poster Session 1: Oncology 1

MP1-15

Disparities in surgical care for post-prostate cancer treatment complications: racial perspectives from a national Medicare-based analysis

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Introduction and Objective: While racial disparities in prostate cancer (PCa) incidence, severity, mortality, treatment, and outcomes have been documented, their impact on care for post-PCa treatment complications remains under-reported. We investigated racial differences in the receipt of surgical care for urinary incontinence (UI) and erectile dysfunction (ED) post-radical prostatectomy (RP) and/or radiation therapy (RT).

Methods: Using the 100% Medicare standard analytical files (SAF), a retrospective cohort study of localized PCa patients from 2015-2021 was completed. Men who underwent RP and/or RT, and subsequently developed UI and/or ED, were grouped into 4 cohorts: RP-ED (n=11,567), RP-UI (n=12,100), RT-ED (n=8,358), and RT-UI (n=5,329). Rates of surgical care (artificial

sphincter or male sling for UI, penile prosthesis for ED) for these complications were compared between White and Black men. Covariate-adjusted impact of race on time to surgical care (age, location, Charlson comorbidity index as covariates) was performed using Cox proportional-hazards modeling.

Results: Surgical care incidence rates were 6.8, 3.61, 3.07 and 1.54 per 100 person-years for RP-UI, RT-UI, RP-ED, and RT-ED cohorts, respectively. Statistically significant intra-cohort racial difference in surgical care incidence were present, except in the RT-UI cohort. Black men were less likely to receive UI surgical care (RP-UI AHR:0.80, 95% CI:0.67-0.96), but more likely to receive ED surgical care (RP-ED AHR:1.79, 95% CI:1.49-2.17; RT-ED AHR:1.50, 95% CI:1.11-2.01) than White men [Table 1].

Conclusions: Surgical care for post-PCa treatment complications was low among PCa survivors aged ≥65 years, and significantly impacted by race. We observed that Black men were more likely to receive ED surgical care, while White men were more likely to receive UI surgical care. Studies investigating the basis for this observation would be novel and informative.

MP1-07

Prospective evaluation of perceived stress among men viewing prostate biopsy pathology results online prior to discussion with a clinician

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Introduction and Objective: The 21st Century Cures Act mandates that patients have instantaneous access to clinical data. We hypothesize that compared to patients viewing their prostate biopsy results with a clinician, patients first reviewing their biopsy pathology results online may experience higher levels of stress.

Methods: We prospectively evaluated patients undergoing prostate biopsy from 12/2022-4/2023. Patients completed a pre-survey prior to biopsy and a post-biopsy survey after discussing their results with the clinician. Collected variables: viewing results prior to clinician discussion, perceived stress scale (PSS-10), age, pre-biopsy PSA and PSA density, prostate size, and pathology results.

Results: Twenty patients (median age 67.5 years) have been enrolled. Median pre-biopsy PSA, PSA density, and prostate volume were 6.5 ng/ml, 0.11 ng/ml2, and 49.5 cc, respectively. Final pathology: n=7 benign, n=9 grade group (GG) 1, n=3 GG2, n=1 GG3.

All patients viewed their pathology results online prior to clinician discussion. 55% (11/20) of patients contacted the office about their results before speaking with the clinician and 25% (5/20) of patients reported additional stress after viewing their results online, however none regretted viewing results online first. 40% (8/20) of patients utilized online resources to better understand

their results. Patients reported high levels of understanding of their results even before discussion with clinician.

Comparing pre- and post-biopsy PSS-10, we observed worsened stress, nervousness, anger, and coping domains. Although differences in other domains were less stark, all demonstrated increases in perceived stress (Figure 1).
Conclusions: Viewing pathology results online prior to discussion with a clinician is common and is associated with worsened stress, nervousness, and coping. Further enrollment is necessary to evaluate and compare stress levels among patients who waited to discuss results with a provider.

Moderated Poster Session 2: Stones, Technology, Education, DEI

MP2-06
Characterizing the Burden of Intraoperative Urological Surgical Waste: Opportunities for Reduction and Mitigation
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Introduction and Objective: In the US, each hospital patient produces about 15.33kg of waste daily, resulting in 5.5 million metric tons of waste every year. The burden of urologic surgical waste has not yet been fully examined. This study aimed to establish baseline estimates of the various types and amounts of intraoperative urological surgical waste, to understand the scope of the problem.

Methods: Data from 31 cases among four surgeons at an urban academic center between July and September of 2021 were analyzed. Three waste streams were measured: regulated medical waste (RMW), normal solid waste (NSW), and laundered linens (LL). Data collection began when the OR team started preparing the room and ended when the team disposed of personal protective equipment. A waste catalog was recorded for each case.

Results: The average 11.11kg and 0.97m^3 generated per case translated to 344.41kg and 30.05m^3 of total waste. Mass and volume of RMW, NSW, and LL were significantly different between case types, with robotic generating the most and endoscopic generating the least (Figure 1). One-way ANOVA was used to compare mean mass and volume of waste streams between case types. In all cases, there was improper disposal of non-RMW items as RMW. The average length of case, in minutes, was 98 for open, 201 for robot-assisted, and 55 for endoscopic. NSW accounted for 52.7% of total waste weight, RMW for 31.3%, and LL for 16.0%.

Conclusions: The results demonstrate the excessive environmental and economic burden of urologic surgical waste, but also highlight opportunities for mitigation and reduction. These

include proper waste segregation, better packaging of surgical equipment, and OR-based educational initiatives.

Moderated Poster Session 4: BPH, Voiding Dysfunction, Female Urology

MP4-09
Differences in Advanced Therapeutic Modalities for Overactive Bladder or Urgency Urinary Incontinence in the US by Race
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Introduction and Objective: Significant disparities exist in the diagnosis & treatment of overactive bladder (OAB). Our objective was thus to analyze if race influences prescription of advance therapies for urgency urinary incontinence (UUI) or OAB.

Methods: The TriNetX Diamond network was queried to identify adult females with a diagnosis of UUI or OAB, excluding those with stress incontinence or mixed incontinence. Propensity-score matching was conducted for several covariates. Treatments were categorized according to AUA guidelines: 1st line therapies included biofeedback training or physical therapy; 2nd line included oxybutynin, darifenacin, solifenacin, tolterodine, fesoterodine, trospium chloride, or mirabegron; 3rd line included percutaneous tibial nerve stimulation, sacral neuromodulation, or OnabotulinumtoxinA injection in 1, 3, or 5 years from diagnosis.

Results: We identified 1,534,042 adult females with OAB or UUI; 437,213 identified as white & 57,443 identified as black. The number of individuals receiving treatment & advancement in treatment over the years are listed in Table 1. 57,443 Black females were then compared to an equivalent number of propensity-score matched White females. Significant difference was observed in advanced treatment prescriptions between race at 1-, 3-, 5- years, and any point thereafter from diagnosis (Table 2).

Conclusions: Though initial 1st line treatment prescription is similar by race; our results demonstrate a significantly lower rate of prescription of 2nd or 3rd line therapies for Black individuals. These results highlight the need for further research to understand these differences.

Moderated Poster Session 5: Oncology 2

MP5-13

Rates of Ovarian Cancer after Radical Cystectomy for Bladder Cancer

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Introduction and Objective: AUA guidelines for radical cystectomy (RC) in women recommend removing adjacent reproductive organs including ovaries to reduce subsequent ovarian cancer (OC) risk. However, the most common histologic type of OC is now thought to originate from the fallopian tubes and many organizations now recommend bilateral salpingectomy (BS) for OC risk reduction at the time of abdominal surgery. In the setting of ongoing debate regarding oophorectomy with RC, rates of OC in a female population undergoing RC for bladder cancer need to be defined.

Methods: A retrospective cohort study was conducted via TriNetX after IRB approval. Baseline demographic and clinical data were compared among patients undergoing RC and RC with concurrent bilateral salpingo-oophorectomy (BSO). Logistic regression analysis was used to establish associations between surgery performed and downstream comorbid diseases.

Results: 1,133 patients underwent RC; 3 RC+BS, and 150 RC+BSO. At baseline, groups did not differ in age, race, ethnicity, or oncologic family or personal history; significant differences were noted in BMI, HTN, HLD, and overweight/obesity. Among those with RC, 1.8% developed ovarian/peritoneal cancer. No significant differences were noted in development of adverse effects between RC and RC+BSO groups (Table 1). No significant difference in all-cause mortality observed between RC and RC+BSO groups (HR = 0.997 [0.827 – 1.203], log-rank p=0.979).

Conclusions: Our study shows 1.8% of females undergoing RC for bladder cancer develop OC. This is consistent with lifetime OC risk in general population. Current performance of BS in lieu of BSO at RC is less than 1[RS1] [PA2] %. Whether BS can replace BSO for ovarian cancer risk reduction at the time of RC in patients with no known or suspected genetic risk for OC warrants further study.

MP5-04

Characterizing Patient Symptoms and Quality of Recovery after TURBT: Preliminary Results from a Multicenter Prospective Cohort Study

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Introduction and Objective: Transurethral resection of a bladder tumor (TURBT) is often described as a “well-tolerated” and “incision-free” operation to diagnosis and treat bladder

cancer. We sought to characterize patient symptoms and quality of recovery associated with present-day TURBT.

Methods: A multicenter prospective cohort study of patients undergoing TURBT was performed from January 2023 to April 2023. Primary study outcomes included postoperative dysuria, penile or vaginal pain, suprapubic pain, urinary urgency, and frequency. Pain scores were measured using a visual analog scale (VAS, 0 to 10), while urinary urgency and frequency were quantified using a validated survey. Descriptive statistics were used to examine the relationship between outcomes and patient and procedural characteristics.

Results: Sixty-nine patients with a median age of 72 years (interquartile range 66 to 77) and 2 (IQR: 1 to 3) prior TURBTs have enrolled to-date. Dysuria, penile or vaginal pain, and suprapubic pain rated > 5 on VAS was reported in 47.8%, 43.5%, and 21.7% of patients, respectively. Body mass index (30.3 vs. 27.6 kg/m2, p=0.04) was significantly greater in patients experiencing > 5 dysuria (Figure 1). A greater proportion of patients with diabetes experienced > 5 suprapubic pain (33.3% vs. 11.1%, p=0.04). “Very strong” or “strong” urinary urgency and frequency occurred in 36.2% and 26.1% of patients, respectively. A substantial proportion of patients experienced constipation (30.4%), lack of sleep (17.4%), an urgent clinic or ED visit (10.1%) and unplanned admission (7.2%).

Conclusions: The degree of distress and discomfort experienced by some patients after TURBT is underappreciated. To embrace a model of survivorship in bladder cancer care, symptom reduction and quality of recovery after TURBT must be optimized.

MP5-02

Active Surveillance versus Primary Intervention for Clinical T1a Kidney Tumors: Thirteen-Year Experience of the DISSRM Prospective Comparative Study

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Introduction and Objective: Active surveillance (AS) is an alternative to primary intervention (PI) in the management of small renal masses (SRMs; clinical stage T1a). However, AS remains underutilized due to the lack of strong, prospective data. We herein report mature outcomes after a Thirteen -year experience with the Delayed Intervention and Surveillance for Small Renal Masses (DISSRM) Registry.

Methods: The DISSRM Registry has prospectively enrolled patients between 2009 to 2022. In this multi-institutional comparative study, all patients with SRM in the registry chose to either undergo AS or PI. Primary outcomes were cancer-specific survival (CSS) and overall survival

(OS); secondary outcomes were progression-free survival (PFS) and recurrence-free survival (RFS). Outcomes were evaluated using Kaplan-Meier survival analysis and log-rank test.

Results: A total of 958 patients were enrolled, 581 (60.65%) chose AS, and 377 (39.35%) chose PI. Ultimately, 88 of 581 AS patients (15.15%) crossed over to delayed intervention (DI). The median follow-up time for the registry was 4.73 years (IQR 2.13-7.18), with 406 patients (42.38%) followed for ≥5 years. There was no difference in CSS between AS and PI (P=0.43). However, AS patients demonstrated worse OS compared to those who underwent PI (P<0.01). In the AS cohort, PFS was 84.3% at 3 years, 78.2% at 6 years, 77.3% at 9 years. RFS was not different between PI and DI (P=0.24).

Conclusions: AS is not inferior to PI for carefully selected patients with SRM suspicious for renal cell carcinoma. The difference in OS between AS and PI is mostly attributable to the increased risk of death from competing causes among AS patients. A priori definitions of progression, including growth rate, should be reconsidered given high rates of progression with few adverse oncologic outcomes.

Moderated Poster Session 6: Pediatrics

MP6-09

Perioperative Opioids Prescribing after Pediatric Urology Procedures is Associated With Persistent Opioid Use Disorder - A Large Claims Database Analysis

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Introduction and Objective: Despite increased cognizance of the detrimental effects of opioid exposure, opioids continue to be prescribed by pediatric surgeons for a variety of inpatient and outpatient procedures. This study aimed to assess the risk of persistent opioid use associated with various pediatric urologic procedures.

Methods: The TriNetX LLC Diamond Network was queried for patients aged 13 to 21 years who underwent six urologic procedures (pyeloplasty, hypospadias repair, inguinal hernia repair, inguinal orchiopexy, hydrocelectomy, or circumcision) and created cohorts of patients who were or were not prescribed postoperative opioids. Propensity matched scoring was performed for age, race/ethnicity, psychiatric diagnoses, and preoperative pain diagnoses. The primary outcome was new persistent opioid use, defined as new opioid use 3-9 months after index procedure without another surgery requiring anesthesia during the post-operative timeframe.

Results: Overall, we identified 32,789 patients of whom 66.0% received a perioperative opioid prescription. After propensity score matching, 18, 416 patients were included: 197 for pyeloplasty, 469 for hypospadias repair, 1,818 for inguinal hernia repair, 2,664 for inguinal orchiectomy, 534 for hydrocelectomy, and 3,526 for circumcision. Overall, 0.41% of patients who did not receive perioperative opioids developed new persistent opioid use, whereas 1.69% of patients who received perioperative opioids developed new persistent opioid use ($p<0.05$). Patients who received perioperative opioids had statistically higher odds of developing new persistent opioid use after hypospadias repair (Risk Ratio (RR): 17.0; 95% Confidence Interval (CI): 2.27-127.2), inguinal orchiectomy (RR: 3.46; 95% CI: 1.87-6.4), inguinal hernia repair (RR: 2.18; 95% CI: 1.07-4.44), and circumcision (RR: 4.83; 95% CI: 2.60-8.98). There was no significant risk of developing new persistent opioid use with prescription of perioperative opioids following pyeloplasty or hydrocelectomy.

Conclusions: We found that the use of perioperative opioids in several pediatric urological procedures is associated with a significant risk of developing new persistent opioid use.

MP6-03

Long-Term Management of Problems in Cloacal Exstrophy: A Single-Institution Review

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Introduction and Objective: Cloacal exstrophy (CE) is the most severe malformation of the exstrophy-epispadias complex. Patients with CE require substantial medical and surgical efforts to address structural and functional problems of neurologic, gastrointestinal, and genitourinary systems. Yet, long-term data regarding clinical outcomes of this aging population remains limited. This study uniquely aims to discuss long-term problems in a single major institution with a high volume of CE patients.

Methods: A prospectively maintained database was reviewed for CE patients with >10 years of follow-up. Urinary, renal, gastrointestinal, orthopedic, psychosocial, and independence attributes were evaluated.

Results: Out of 149 CE patients followed, there were 63 patients who met inclusion. Median age was 20.9 years [10.2-59.3]. Thirty-seven (58.7%) were >18 years. Twenty-one (33.3%) were born female and 39 (61.9%) born male, 14 of whom were gender converted at birth. Gender identity was self-reported 26 males, 36 females, and 1 non-binary. There were two deaths, one cancer and another associated with ESRD. Two females conceived naturally, and two patients adopted. Catheterizable channels were the most common method of voiding (45/63, 71.4%). Of those, 88.9% (40/45) were continent. Forty-six patients (73.0%) had no CKD while 4 (6.3%) progressed to renal replacement therapy (RRT). Gastrointestinal diversion was managed by colostomy (37/63, 58.7%) and ileostomy (17/63, 27.0%). Most patients underwent osteotomy (47/63, 74.6%). Thirty-eight percent (24/63) required a wheelchair. Psychosocial diagnoses

included 19/63 (30.2%) patients with anxiety and/or depression and 17/63 (27.0%) patients with chronic pain. Out of the 52 patients who were evaluated by physical therapy, 46 (88.5%) were independent. Two patients (3.2%) had cognitive delay.

Conclusions: Improvements in intensive care, gastrointestinal, orthopedic, and urologic management have resulted in survival rates approaching 100%. Yet CE children face long-term problems requiring collaborative efforts across multi-disciplinary fields. Description of these challenges is the first step in improving these outcomes.

MP6-01

A Single Center's Changing Trends in the Management and Outcomes of Primary Closure of Classic Bladder Exstrophy: An Evolving Landscape

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Introduction and Objective: Classic bladder exstrophy (CBE) is a rare malformation where several factors can affect the timing of its management. The aim of this study was to investigate trends in treatment for CBE over the past twenty years at the author's institution, an exstrophy center with a large referral population.

Methods: An institutional database of 1415 exstrophy-epispadias complex patients was retrospectively reviewed for CBE patients with primary closure between 2000 and 2019. Osteotomy use, age at closure, and outcome of closures were reviewed.

Results: A total of 278 primary closures were identified, with 100 occurring at author's hospital (AH) and 178 at outside hospitals (OSH) (Table 1). Osteotomies were performed in 54% of cases at AH and 52.8% of cases at OSH. Osteotomy use increased over 20 years from 48.6% in 00's to 62.1% in 10's ($p=0.046$). The total success rate at AH was 96% and 62.9% at OSH ($p<0.001$). The median age at primary closure at AH increased from 5 days (00's) to 20 days (10's), compared to the OSH which increased from 2 days (00's) to 3 days (10's). Nominal logistic regression suggests the location of bladder closure and use of pelvic osteotomy were significantly associated with successful closure (AH vs OSH, OR=14.5, 95% CI 4.95-42.24) (OR=1.86, 95% CI 1.02-3.41). Age at closure did not significantly relate to success.

Conclusions: Closure of CBE may be delayed for several reasons including insurance difficulties, transfer to another hospital, desire for second opinions, or surgeon preference. Delaying primary closure of bladder exstrophy does not appear to increase the failure rate and gives families time to adjust lifestyle, arrange travel, and seek care at centers of excellence.

MP6-04

Bladder Exstrophy Epispadias Complex Related Litigation: A Legal Database Review

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Introduction and Objective: To characterize bladder exstrophy-epispadias related malpractice litigation in the United States (US).

Methods: Two legal databases (Nexis Uni, WestLaw) were reviewed for state and federal cases using the terms "bladder exstrophy," "cloacal exstrophy," "epispadias," in combination with "medical malpractice," or "negligence," or "medical error," or "complication," or "malpractice," or "tort." Databases were queried between 1948 to 2022 and reviewed for medical and legal details.

Results: Our search yielded 16 unique legal cases with 6 fitting established criteria for analysis. Urology and pediatric urologist were named in 50% of cases. Suits named community medical systems in half of cases. Cause for lawsuit included negligence in surgical performance (50%), primary closure of exstrophy (33%), and post-operative care (50%). Settlement agreement was reached in one case (17%). Outcomes favored the physician in 60% of trials. Lawsuits alleging negligent surgical performance and/or post-operative care exclusively named urologists with outcomes favoring the surgeon in 66% of cases. The settlement payment (n=1) was $500,000 and monetary damages (n=1) equated to $1.3 million.

Conclusions: Malpractice litigation related to BEEC treatment is rare. In trial, outcomes most favor the medical provider. Cases that resulted in financial liability successfully alleged avoidable negligence resulting in irreversible physical damage. The authors recommend families with BEEC seek board-certified pediatric urologists experienced in treating this complex and/or Bladder Exstrophy Centers of Excellence. Further, we recommend surgeons treating BEEC properly educate patients and families on the severity of this major birth defect including its lifelong implications and need for surgical revisions.

MP6-02

A Single-Institutional Experience with Prenatal Diagnosis of Cloacal Exstrophy: Room for Improvement

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Introduction and Objective: A single institutional study characterizes the rate of prenatal diagnosis of cloacal exstrophy (CE) and examines its role on successful primary closures.

Methods: An institutional database of 1485 exstrophy-epispadias patients was reviewed retrospectively for CE patients with confirmed presence/absence of prenatal diagnostics, primary

exstrophy closure since 2000, institution of closure, and at least 1 year of follow up following closure.

Results: The cohort included 56 domestic patients and 9 international patients. Overall, 78.6% (n=44) of domestic patients were prenatally diagnosed while 21.4% (n=12) were diagnosed postnatally. A positive trend was observed in the rate of prenatal diagnosis across the study period, 56.3%, 84.2%, 88.9% respectively (p=0.025). Confirmatory fMRI was obtained in 40.9% (n=18) of prenatally diagnosed cases. Patients diagnosed prenatally were found to be more likely to undergo treatment at exstrophy centers of excellence (72.1% v 33.3%, p=0.020). Prenatal diagnosis was not predictive of increased rate of successful primary closure (75.6% vs 75.0%; p=1.00; OR: 1.03, 95% CI: 0.23 – 4.58). Primary closures undertaken at exstrophy centers of excellence were significantly more likely to be successful compared to outside hospitals (90.9% v 50.0%, p=0.002).

Conclusions: The rate of prenatal diagnosis of CE in patients referred for management to a high-volume exstrophy center is improving. Despite this improvement, patients continue to be missed in the prenatal period. While prenatal diagnosis offers the ideal opportunity to educate, counsel, and prepare expectant families, patients diagnosed at birth are not disadvantaged in their ability to receive a successful primary closure. Further research should investigate the benefit of patient referral to high-volume exstrophy centers of care to ensure optimal care and outcomes.