

including 1,987 men (37.4%) and 1,583 women (22.1%). Participants who had nocturia with urgency had a significantly higher prevalence of obesity (37.3% vs 32.3%, $p=0.020$), hyperglycemia (37.5% vs 32.5%, $p=0.012$), dyslipidemia (42.0% vs 37.9%, $p=0.046$), and MetS (24.0% vs 18.8%, $p=0.002$), compared with those without urgency. In multivariate analysis, a significant association was found between urgency and the following: age, female (OR 1.58, 95%CI 1.33-1.88), obesity (1.34, 1.11-1.60), and hyperglycemia (1.20, 1.01-1.20) among participants with nocturia. A significant association was found between nocturia with urgency and MetS. The age and sex-adjusted odds ratio (95%CI) was 1.49 (1.22-1.82).

CONCLUSIONS: Our study confirmed that individuals who report nocturia with urgency are more at risk of obesity, hyperglycemia, and MetS than those with nocturia without urgency. The combination of symptoms should prompt closer attention to cardiovascular health among primary care providers.

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MP31-16

NOCTURNAL-ONLY VOIDING DIARIES MAY DISPROPORTIONATELY MISS THE DIAGNOSIS OF 24-HOUR POLYURIA IN WOMEN

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INTRODUCTION AND OBJECTIVE: The 24-h voiding diary is a gold standard in the evaluation of nocturia. Comparatively, a nocturnal-only voiding diary is less burdensome, while still offering insight into nocturnal volumes and bladder capacities, which can be used to diagnose nocturnal polyuria (NP) or small nocturnal bladder capacity, respectively. In practice, high urine volumes on a nocturnal-only voiding diary are also suggestive of 24-hour polyuria (>40 mL/kg/24-h), and are thus a strong indication for the clinician to follow-up with a full 24-h diary. However, the extent to which nocturnal-only diaries may fail to diagnose 24-hour polyuria has not been established. Accordingly, this study aims to determine the sensitivity of nocturnal urine production (NUP) in detecting 24-hour polyuria.

METHODS: A merged voiding diary database was created from 3 datasets: a prospective protocol involving subjects recruited from a urology ambulatory care unit; a prospective protocol that recruited subjects who consulted a continence clinic; and an institutional database of LUTS patients providing routinely collected data. Patients were included if they were ≥ 18 years and had 24-hour polyuria (>40 mL/kg/24-h) with ≥ 1 nocturnal void (s). NUP rates (mL/h) from those included were analyzed to establish 80%, 90%, and 100% sensitivities for 24-hour polyuria.

RESULTS: A total of 51 patients were included (57% women; median age 67 [52-74 IQR] years, weight 68 [60-79] kg, 24-h urine volume 46.3 [43.8-52.4] mL/kg, NUP 126 [95-166] mL/h, and 3 [2-4] nocturnal voids). A sensitivity $\geq 80\%$ for a diagnosis of 24-hour polyuria was observed at NUP ≥ 87 mL/h in all patients; ≥ 58 mL/h in women; and ≥ 116 mL/h in men. A sensitivity $\geq 90\%$ was observed at NUP ≥ 58 mL/h in all patients; ≥ 42 mL/h in women; and ≥ 110 mL/h in men. The minimum NUP (i.e., 100% sensitivity) was 31.3 mL/h in women and 107 mL/h in men.

CONCLUSIONS: In men, a NUP which exceeds or even meets the cutoff for NP (90 mL/h) may obviate the need for a full 24-h diary in the appropriate clinical setting. In contrast, women with 24-hour polyuria may produce but little urine at night, and completion of a full 24-h diary is thus particularly critical in classifying the etiology of nocturia in women. Further research is needed to elucidate potential sex differences in the pathophysiology of polyuria.

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MP31-17

SEX DIFFERENCES IN RADIATION INDUCED BLADDER DYSFUNCTION ARE MORE ACCURATELY CAPTURED USING THE ICIQ FLUTS AND MLUTS QUESTIONNAIRES IN AN OBSERVATIONAL RADIOTHERAPY COHORT

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INTRODUCTION AND OBJECTIVE: To examine sex differences in radiation induced bladder dysfunction following radiotherapy, men and women with storage and voiding dysfunction were prospectively enrolled in an observational cohort, enriched with women undergoing radiotherapy for cervical and endometrial cancer.

METHODS: There were 205 men and women consented for enrollment over the 6 month study period (May to October 2019). A total of 176 questionnaires (AUASS, ICIQ FLUTS/MLUTS) were collected. Participants with complete data were included for analysis. Primary outcome was gender differences in the storage, voiding and incontinence domains of the ICIQ questionnaires. Data were analyzed in SAS using ANOVA with Tukey correction.

RESULTS: 136 participants completed questionnaires (Non-radiated women $n=52$, mean age 55.4 ± 18.5 years; Radiated women $n=18$, age 58.5 ± 15.6 ; Non-radiated men $n=55$, age 57.6 ± 18.5 ; Radiated men $n=11$, age 64.5 ± 15.6) and had a mean time since radiation of $3,530 \pm 3,163$ (median 3,142; IQR 544-5,042) days in men, and $2,615 \pm 4,171$ (median 87; IQR 21-3,215) days in women. There was no significant difference in post void residual, or AUASS overall score (ANOVA $p=0.294$) between any groups. All domains of the AUASS failed to capture between group differences in storage and voiding dysfunction in radiated individuals, with the exception of difficulty postponing urination (ANOVA $p=0.012$). Non-radiated women reported significantly higher AUASS QOL score (4 ± 1.6 versus men 2.8 ± 1.6 , ANOVA $p<0.001$), and did not differ significantly compared to radiated women. In the storage domain of the ICIQ there was an increase in urinary urgency (ANOVA $p=0.004$) after radiotherapy, with male gender protective, and no difference in nocturnal (ANOVA $p=0.479$) and daytime (ANOVA $p=0.193$) urinary frequency. In the voiding phase domain of the ICIQ, radiated men had the greatest intermittency (ANOVA $p=0.048$), radiated women tended to have the lowest hesitancy (ANOVA $p=0.075$), and there was no difference in straining (ANOVA $p=0.177$). Across the incontinence domains of the ICIQ, radiotherapy uniformly increased urgency incontinence (ANOVA $p<0.001$), and nocturnal enuresis (ANOVA $p=0.016$) in all radiotherapy groups, with more men reporting stress (ANOVA $p<0.001$) and unawareness incontinence (ANOVA $p=0.002$) after radiotherapy.

CONCLUSIONS: The ICIQ FLUTS and MLUTS are more sensitive than the AUASS at classifying the burden of storage and voiding dysfunction in men and women following radiotherapy.

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MP31-18

CHARACTERIZATION OF URINARY INCONTINENCE BEFORE AND AFTER HOLEP: A PROSPECTIVE STUDY

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INTRODUCTION AND OBJECTIVE: To our knowledge, there has been no comprehensive prospective study using structured questionnaires regarding natural history of urinary incontinence (UI) before and after HoLEP in BPH patients. This study aims to investigate incidence of UI and its type before and after HoLEP, and relationship between UI patterns and clinical factors.

METHODS: Patients in prospective BPH Database Registry from September 2017 to December 2018 who underwent HoLEP for BPH, were enrolled. Serum PSA, transrectal ultrasonography and