“Bowel function, sexual function, and symptoms of pelvic organ prolapse in women with and without urinary incontinence”

Purpose: to describe various PF symptoms among women with/out UI (urinary incontinence) and subtypes of UI to include constipation, diarrhea, fecal incontinence, POP and sexual dysfunction.

Aims of study: to add to body of study regarding relationships between bowel symptoms, prolapse symptoms and sexual function in women with MUI(mixed urinary incontinence), SUI (stress urinary incontinence), and UUI (urge urinary incontinence).

Study Design: 1- year, multi-center, prospective observational cohort study from NIH/NIDDK-sponsored Symptoms of Lower Urinary Tract Dysfunction Research Network (LURN)

Data collection: standardized clinical examination, including pelvic exam with Pelvic organ prolapse quantification (POP-Q), assessment of PF mm strength – Oxford scale, urinalysis, and measurement of post-void residual. Medical History includes: functional comorbidity index (FCI), patient reported symptoms of LUTS, PF symptoms, psychological symptoms, and QOL (quality of life).

Tools: LUTS (Lower Urinary Tract Symptoms) Tool was used to determine UI: MUI, SUI, UI. Participants completed: Pelvic Organ Prolapse/Incontinence Sexual Questionnaire, IUGA Revised (PISQ-IR), Genitourinary Pain Index (GUPI), Pelvic Distress Inventory-20 (PFDI-20), Patient-Reported Outcomes Measurements Information System (PROMIS) GI Constipation, Diarrhea, and Fecal Incontinence scales. Urinary Distress Inventory (UDI-6), Pelvic Organ Prolapse Distress Inventory (POPDI-6) , Colorectal -Anal Distress Inventory (CRADI-8), PISQ-IR, PROMIS

Statistical Methods: Differences between groups-chi-square tests, Wilcoxon two-sample tests, Kruskal-Wallis tests. Descriptive stats for sexual function, pelvic floor, and bowel symptom measures; differences between groups – one-way ANOVA; to calculate effect sizes-Cohen’s D; multivariable liner regression- used to test foe associations between UI vs Non/UI, sexual function, pelvic floor, bowel measures.

Results: N=545 from 6 sites
Mean age: 56.4+/_ 14.4 years.
Race: 82% Caucasian
Mean BMI : 30.6+/_ 7.8 kg/m2
Diabetes: 15%
Obstetric Hx: mean 2 vaginal births
Gyn Hx: 64% post- menopausal  63% Stage 0-1 prolapse, 30% stage 2, 6% stage 3-4
17% estrogen treatment  30% prior hysterectomy, 14% surgery for UI and/or prolapse
51% sexually active
Without UI 18% - had lower mean BMI, less likely to have recurrent UTIs, fewer self-reported co-morbidities
With UI : 57% MUI, 20 % UUI, 17% SUI, 6% other UI
Women with MUI: older, with higher BMI, prevalence of smoking and sleep apnea, increased co-morbidities than those with UUI or SUI

Sexual function & UI: PISQSA-Condition Impact subscale: those with MUI – worse function (avg 73.3), SUI (avg 86.3), UUI ( avg 87.4)

UI during sexual activity worse in SUI (17%) and MUI (18%); UUI (4%)

Prolapse & UI: “Bother” by prolapse worse in UI group compared to no incontinence- descent of A/P wall no different.

Bowel function & UI: these with UI – Higher PROMIS Constipation and diarrhea scores- indicating worse bowel function. MUI group: higher (worse) PROMIS scores for diarrhea and fecal incontinence. After adjustment, differences remained between MUI and SUI groups, not between MUI and UUI. Increased severity in UI, worse bowel function.

Women with LUTS:
1. Presence of UI is associated with constipation and poor sexual function
2. MUI is associated with worse fecal incontinence, diarrhea, POP symptoms, sexual function compared to SUI
3. More severe UI symptoms, regardless of UI subtype, are associated with worse bowel function, POP, sexual function.
4. Poorer sexual function was found in women with MUI, no large difference between stress and urgency UI subtypes in larger population.

Theoretical explanations for association between bowel & bladder dysfunction: both originate from same cloaca, therefore distention into rectal vault could affect bladder; share afferent nerves- reason sacral neuromodulation is used to treat both bowel and bladder incontinence. Reason MUI patients have worse bowel function secondary to lack of support and nerve deficits

Strengths: large sample size, different sites, multiple questionnaires- body site specific
Limitations: self-reported SXS- no Uro-D, possibly lower complexity patients, UI measuring tool not validated, ? reproducibility.

1. Does anyone work with a team that communicates with one another—ie participate in a multidisciplinary meeting of sorts for complex patients?
2. Are many of your patients using neuromodulation (or TENS/interferential) with good overflow results for the other body system- i.e. patient with MUI having improved diarrhea /constipation with improved UI?
3. Do you focus on one system over the other when developing your treatment plan-Considering patient goals, referral sources given diagnosis, your clinical findings?