Practice Changing Articles from 2018-19

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July 1, 2019
Quebec City, Quebec
CUA conflict of interest

• None
A review of 12 months of publications was crowd sourced to highlight studies important to everyone

- Men’s Health: Reproductive Health / Erectile function (2)
- Functional urology: UTI, incontinence (2)
- BPH: medical management (1)
- Stones (1)
- Urology Practice (1)
- Pediatrics (3)
Practice Changing Articles: 2018-2019

- Thank you to those who suggested articles and provided their input and insights
  - Dr. Rodrigo Romao
  - Dr. Naeem Bhjoani
  - Dr. Peter Metcalfe
  - Dr. Ashley Cox
  - Dr. Phil Bach
  - Dr. Gary Gray
  - Dr. Blayne Welk
  - Dr. Mitchell Humphreys
  - Dr. Ryan Flannigan
A review of 12 months of publications was crowd sourced to highlight studies important to everyone

- **Men’s Health: Reproductive Health / Erectile function (2)**
- Functional urology: UTI, incontinence (2)
- BPH: medical / surgical management (3)
- Stones (1)
- Urology Practice (1)
- Pediatrics (3)
Background/Importance:

• Downward trends in sperm concentration /count / quality have been reported over the last 8 decades
• Many dietary influences have been investigated
• This article highlights physiologic processes where nutritional substrates may help/hinder spermatogenesis

Design:

• Systematic review

Findings:

• A) Omega 3 Fatty Acids (DHA+EPA supplementation 21 men with oligoastheneoteratospermia) improve sperm quality (count, concentration, % motility, morphology)
  
  Walnuts: supp RTC improved sperm quality
  
  Fish: prospectively found to decreased time to pregnancy
Diet and men's fertility: does diet affect sperm quality?

B) Trans fat/saturated fat: deleterious effects
   - Animal models show – poor semen quality, dec T, testicular mass, test degeneration.
   - Saturated fats: observational study inversely related to sperm count

C) Antioxidants: Protective/beneficial effects
   - RTC improves semen quality, motility, preg of live birth. (Vit C, vit E, beta carotene)
   - RTC Folate with zinc increased sperm counts without effects on FHS, T, or inhibin B

D) Dairy / Beef:
   - modern dairy farming: 60-80% dietary estrogen
   - Beef: anabolic sex hormones (est, progest, tesost) – inconclusive

E) Methyl-mercury: fish intake likely outweighs the risk of heavy metal contamination

F) Farming pesticides: total fruit/veg unrelated to sperm. High pesticide residue fruits
   (strawberry, spinach, apples) poorer semen quality in fertility clinic patients
Diet and men's fertility: does diet affect sperm quality?

G) Dietary patterns:
- Mediterranean diet good for sperm quality
- Unhealthy diet (fats red/processed meats, refined grains, sweets) deleterious

Take-home Points:
- **Good**: Increased omega3 fatty acids from foods nut/fish
  - Antioxidant supplementation: folate, b12, zinc
  - Healthy eating patterns
- **Bad**: Western dietary pattern
- **Questionable**: Environmental toxins, soy, dairy, meat
Background/Importance

• Penile curvature can be a debilitating factor in sexual health, and is now being more commonly treated with Collagenase Clostridium Histolyticum (Xiaflex)

• Could traction improve outcomes

**Design:** Retrospective review of 287 patients divided into 3 cohorts

**Methods:**

• After CCH injection (Peyronie’s with >30%) penile traction devices were assessed
Efficacy of Combined Collagenase *Clostridium histolyticum* and RestoreX Penile Traction Therapy in Men with Peyronie’s Disease

3 cohorts of men:
Mean Change in Penile Curvature By Group

Percentage change from baseline showing significant improvements in RestoreX +CCH

Mean Change in Penile Length By Group

CM and % change, (final-baseline length), symphysis to corona
Efficacy of Combined Collagenase *Clostridium histolyticum* and RestoreX Penile Traction Therapy in Men with Peyronie’s Disease

- **Subjective Improvement:**
  - Meaningful % change: 93% vs 80-85%
  - Improved Penetration: 93% vs 78-80%

- **AEs:** no difference in ecchymosis (30, 50, 19%, p=0.13). No fractures in group 3

**Take-Home Point:** Pairing successful treatment or full course with effective PTT can improve curvature and length, with minimal risk of additional AE
Practice Changing Articles: 2018-2019

- Men’s Health: Reproductive Health / Erectile function (2)
- **Functional urology**: UTI, LUTS, incontinence (5)
- BPH: surgical, medical management
- Endourology/Stones
- Urology Practice
- Pediatrics
Background/Importance:

Recurrent UTIs in younger women rely on lifestyle modification as first line primary prevention.

Though many recommendations exist, little is known about their true effect on prevention.
Effect of Increased Daily Water Intake in Premenopausal Women With Recurrent Urinary Tract Infections: A Randomized Clinical Trial

**Design:** Multicenter RTC of women with recurrent UTIs

**Methods:**
- **Inclusion criteria:** Premenopausal, >18, “good general health”, 3 episodes of “infectious cystitis” in the preceding year
- **Self reported fluid intake** <1.5L/day
- **Intervention:**
  - Centrally Randomized 1:1
  - Bottled water (home delivery) + education on adding 1.5L per day over baseline, vs control (no increase)
  - Monthly phone call, 3d fluid diary, 6 and 12 month 24hr urines

**Primary outcome:**
- Reduction in UTI

**Secondary outcome:** number of antibiotic courses, 24hr urine volume changes, time to first UTI
- Safety, AE
Outcomes:

• n=64 treatment, n=69 control

Population:

• 36yo, 92% sexually active, 3.3 preceding UTI/year

Hydration compliance:

• At 12months 24hr urine increased by 1.7L, no change in control
• No significant AE were reported
Effect of Increased Daily Water Intake in Premenopausal Women With Recurrent Urinary Tract Infections: A Randomized Clinical Trial

UTI Outcomes:

- 1.7 UTI episodes (vs 3.2 in control)
- 1.7 less antibiotic prescriptions

Take-home Points: Level 1 evidence now exists for a 30% decrease in symptomatic UTIs and antibiotic use by increasing hydration in young healthy women.

Given the rigorous design, compliance and treatment effect may be difficult to achieve in a clinical practice.
Long-term Safety and Efficacy of Mirabegron and Solifenacin in Combination Compared with Monotherapy in Patients with Overactive Bladder: A Randomised, Multicentre Phase 3 Study (SYNERGY II)


Primary objective: SAFETY of Combination therapy for OAB/UUI:

Design: n=1800, double blind, 12week study
  • Solifenacin 5mg
  • Mirabegron 50mg
  • Solifenacin + Mirabegron

Outcomes: AE: 49%combo, 44% Solif, 41% Mirabeg
  • Drymouth: combo (6.1%), M (3.9%), S (5.9%)
  • Constipation: combo (3%), M(1%), S (2.3%)
  • UTI: combo (8.4%), M (6.2%) S (5.9%)
  • Severe AE: Afib in 1 Mirabegron patient

Efficacy:
  • UUI: -2.6 episodes Combo, -2.1Mirbeg, -0.4 Solif
  • HRQoL, OABq, all improved within 1month

Treating Overactive Bladder in Older Patients with a Combination of Mirabegron and Solifenacin: A Prespecified Analysis from the BESIDE Study

William Gibson, Scott MacDiarmid, Moses Huang, Emad Siddiqui, Matthias Stözel, Nurul Choudhury, Marcus J. Drake

• Assessed combination therapy in older patients with urgency incontinence
• Design: Solifenacin 5mg was given for 4w. Those with remaining incontinence were randomized to:
  • Solifenacin 5mg
  • Solifenacin 10mg
  • Solifenacin 5mg + Mirabegron 25 (increased to 50mg)
• Results: 2110 pts randomized

  Combo Tx Improved:
  Incontinence/day
  Voids/day
  Urgency

  • No differences in AE (AUR, CV, dizziness/falls)
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Background/Importance:

• Anticholinergic (AC) exposure has been thought to be a possible modifiable risk factor for dementia by its ability to block acetylcholine in the central and peripheral nervous systems
• Therefore this study was designed to assess the association between cumulative AC drug use and the risk of dementia.

Design:

• Nested case controlled design Primary Care database (3 million patients from UK)
• 58,769 patients identified with a diagnosis of dementia, matched 1:5 with 225,000 controls
• 11y exposure window
• Cumulative and Total Standard Daily Doses (TSDD) was calculated for 11 categories of anticholinergics
• Anticholinergics prescribed the year before Dx of dementia were censored as they may have been used to treat dementia symptoms
• Confounders were accounted for, and specific subtypes of dementia were excluded to reduce indication bias
Outcomes:

At diagnosis of dementia:
- 82y/o, 63% female, 60% Alzheimer/mixed, 36% Vascular dementia 3.6% other

Exposure to at least one AC Rx:
- 56% of those with dementia, 51% control – at least one
- Median AC: dementia-6, control-4

<table>
<thead>
<tr>
<th>Class</th>
<th>Case</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antidepressants</td>
<td>27%</td>
<td>23%</td>
</tr>
<tr>
<td>Antiemetics</td>
<td>24%</td>
<td>21%</td>
</tr>
<tr>
<td>Bladder</td>
<td>11.7</td>
<td>8.3</td>
</tr>
<tr>
<td>GI Antispasmodic</td>
<td>6.9</td>
<td>6.9</td>
</tr>
<tr>
<td>Antiarrhythmics</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Antimuscarinic Bronchodil</td>
<td>6.6</td>
<td>6.2</td>
</tr>
</tbody>
</table>
Over 11y exposure:

- Stronger associations in younger patients exposed to high AC
  - < 80, AOR 1.81
  - >80, AOR 1.36

- Associations were strongest for antidepressants, bladder antimuscarinics, antipsychotics, an antiepileptic drugs

<table>
<thead>
<tr>
<th>Bladder Antimuscarinics, TSDDs</th>
<th>Nonuse</th>
<th>1-90</th>
<th>91-365</th>
<th>366-1095</th>
<th>&gt;1095</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>51 905 (88.3)</td>
<td>2139 (3.6)</td>
<td>1417 (2.4)</td>
<td>1244 (2.1)</td>
<td>2064 (3.5)</td>
</tr>
<tr>
<td></td>
<td>206 796 (91.7)</td>
<td>7005 (3.1)</td>
<td>4078 (1.8)</td>
<td>2941 (1.3)</td>
<td>4754 (2.1)</td>
</tr>
</tbody>
</table>

Adjusted OR

- 1 (Reference)
- 1.21 (1.15-1.27)
- 1.38 (1.30-1.47)
- 1.71 (1.59-1.83)
- 1.73 (1.64-1.82)
Take-home Points:

• Causality cannot be established by this study: however it appears that 10% of dementia diagnoses are associated with AC prescriptions.
  • Modifiable Dementia risk factors: Htn(5%), inactivity (6.5%), Smoking (14%)
• Judicious use of AC may benefit those at risk of dementia
• Total AC load should be assessed and optimized
Background/Importance:

- Though artificial urethral sphincters (AUS) have been considered the gold standard for men, sphincter use in women has been limited by technical challenges of the retropubic approach to implantation.

- Variable usage internationally with EUA calling it a last resort, AUA guidelines not mentioning it, and France considering it the gold standard.

- Robotic female AUS implantation has started to gain momentum globally due to the improved ease of dissection and access to the bladder neck, minimized bleeding, and lower morbidity than an open procedure.
A retrospective pooled analysis of 50 cases by 10 surgeons (5 institutions) with mixed robotic and AUS experience was performed:

- 6 had minimal (<50) robotic experience, and no fAUS
- The rest either had strong robotic OR strong fAUS experiences

- Patient Population: >1y follow up
  Type III SUI and ISD (low closure pressure, loss of mobility, negative marshall bonney test)

- Primary Outcome: complete continence (no-pad) status at 1y

#7 Eur Urol 2019(75)169-75
Revision: bladder neck erosion, Mechanical failure, proximal labial migration of the pump.

Explantation: vaginal erosion in a patient who had a known vaginal injury intra-op.

Revision: bladder neck erosion, Mechanical failure, proximal labial migration of the pump.

Table 1 – Patient characteristics

<table>
<thead>
<tr>
<th></th>
<th>N = 49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median age (yr)</td>
<td>70.5 (28–86)</td>
</tr>
<tr>
<td>Body mass index (kg/m²)</td>
<td>27.5 (±4.6)</td>
</tr>
<tr>
<td>ASA score</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8 (16.3%)</td>
</tr>
<tr>
<td>2</td>
<td>31 (63.3%)</td>
</tr>
<tr>
<td>3</td>
<td>10 (20.4%)</td>
</tr>
<tr>
<td>History of previous anti-incontinence surgery</td>
<td>42 (85.7%)</td>
</tr>
<tr>
<td>History of previous midurethral sling</td>
<td>39 (79.6%)</td>
</tr>
<tr>
<td>Median preoperative urethral closure pressure (cmH₂O)</td>
<td>20 (8–45)</td>
</tr>
<tr>
<td>History of pelvic radiation therapy</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

ASA = American Society of Anesthesiologists.

Table 3 – Functional outcomes

<table>
<thead>
<tr>
<th></th>
<th>N = 49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median follow-up (mo)</td>
<td>18.5 (12–64)</td>
</tr>
<tr>
<td>Explantation</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Revision</td>
<td>3 (6.1%)</td>
</tr>
<tr>
<td>Functional outcomes</td>
<td></td>
</tr>
<tr>
<td>Cured</td>
<td>40 (81.6%)</td>
</tr>
<tr>
<td>Improved</td>
<td>6 (12.2%)</td>
</tr>
<tr>
<td>Unchanged</td>
<td>3 (6.1%)</td>
</tr>
<tr>
<td>De novo overactive bladder symptoms</td>
<td>3 (6.1%)</td>
</tr>
<tr>
<td>Sphincter deactivated permanently due to difficulties in handling the pump</td>
<td>2 (4.1%)</td>
</tr>
</tbody>
</table>
Take-home Points:

• The use of Female sphincters have a poorly defined role in our current management of SUI, but is gaining interest

• Compared to the open literature: bladder neck injuries, vaginal injuries, explanation can occur in up to 40% of cases

• Complication rates are low, even in the hands of novice robotic surgeons with/out prior AUS experience

• Now being performed in Canada, select women with severe SUI may have expanding options
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- Men’s Health: Reproductive Health / Erectile function
- Functional urology: UTI, incontinence
- **BPH: medical management (1)**
- Endourology/Stones
- Urology Practice
- Pediatrics
#8

A prospective randomised placebo-controlled study of the impact of dutasteride/tamsulosin combination therapy on sexual function domains in sexually active men with lower urinary tract symptoms (LUTS) secondary to benign prostatic hyperplasia (BPH)

Claus G. Roehrborn*, Michael J. Manyak†, Juan Manuel Palacios-Moreno‡, Timothy H. Wilson§, Erik P.M. Roos‡, Javier Cambronero Santos**, Dimitrios Karanastasis†‖, Janet Plastino†‡, François Giuliano†§ and Raymond C. Rosen†‖

**Background/Importance:**
- Traditionally SF was reported as an AE (without prompting) which risks under-reporting and does not capture various domains of SF
- To measure the effect of combination therapy on sexual function, when prescribed for BPH in sexual active men.

**Design:** European/Australian double blind placebo controlled trial

**Methods:** 51 centres enrolled 250 men per arm (1:1 centralized randomization)
- **Intervention:** Dutasteride 0.5mg + Tamsulosin 0.4mg  
  **Control:** Placebo
- Inclusion Criteria: Sexually active (w/in 4w), >50, vol >30cc, PSA 1.5-10, IPSS >12, no prior ARI use
- Validated Male Sexual Health Questionnaire (MSHQ) was used to assess various domains of male sexual function

Canadian Urological Association
Prospective randomised placebo-controlled study of the impact of dutasteride/tamsulosin combination therapy on sexual function domains in sexually active men with LUTS secondary to BPH

Outcomes:

• Overall *sexual health measures worsened with combination therapy* compared to the placebo over 12 months (-8.7 vs -0.7 p=<0.001)
  • Effects started at 1m follow up

• By comparing domains of sexual function
  • erectile function worsened equally in treatment/placebo (minimal change)
  • sexual satisfaction decreased slightly in treatment group (minimal change), unchanged in placebo
  • Ejaculatory dysfunction accounted for overall reduction sexual health score
#8

## Table 4 Summary of AEs (ITT population).

<table>
<thead>
<tr>
<th>AE type, n (%)</th>
<th>Placebo (N = 246)</th>
<th>DUT-TAM FDC therapy (N = 243)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any AE</td>
<td>116 (47)</td>
<td>139 (57)*</td>
</tr>
<tr>
<td>Any SAE</td>
<td>9 (4)</td>
<td>27 (11)§</td>
</tr>
<tr>
<td>Any drug-related AE§</td>
<td>42 (17)</td>
<td>86 (35)§</td>
</tr>
<tr>
<td>ED</td>
<td>15 (6)</td>
<td>21 (9)</td>
</tr>
<tr>
<td>Retrograde ejaculation</td>
<td>3 (1)</td>
<td>20 (8)</td>
</tr>
<tr>
<td>Ejaculation disorder</td>
<td>2 (&lt;1)</td>
<td>15 (6)</td>
</tr>
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<td>Ejaculation failure</td>
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<td>6 (2)</td>
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<td>3 (1)</td>
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<tr>
<td>Decreased libido</td>
<td>12 (5)</td>
<td>19 (8)</td>
</tr>
<tr>
<td>Decreased semen volume</td>
<td>2 (&lt;1)</td>
<td>11 (5)</td>
</tr>
<tr>
<td>Dizziness</td>
<td>0 (0)</td>
<td>4 (2)</td>
</tr>
<tr>
<td>Any serious drug-related AE</td>
<td>2 (&lt;1)</td>
<td>2 (&lt;1)</td>
</tr>
<tr>
<td>Any AE leading to study medication discontinuation</td>
<td>20 (8)</td>
<td>33 (14)</td>
</tr>
<tr>
<td>Any AE leading to study withdrawal</td>
<td>23 (9)</td>
<td>33 (14)</td>
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*P = 0.03; §P = 0.002; ‡P < 0.001. §≥1% in any group.

## Table 6 Number and type of unresolved AEs and sexual or breast AEs of special interest at 12 months (end of treatment) and 18 months (after follow-up).

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<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Ejaculation disorders</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Altered (decreased) libido</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Breast disorders</td>
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<td>31 (6)</td>
<td>31 (6)</td>
</tr>
<tr>
<td>Dizziness</td>
<td>20 (8)</td>
<td>33 (14)</td>
</tr>
<tr>
<td>Any serious drug-related AE</td>
<td>2 (&lt;1)</td>
<td>2 (&lt;1)</td>
</tr>
<tr>
<td>Any AE leading to study medication discontinuation</td>
<td>23 (9)</td>
<td>33 (14)</td>
</tr>
</tbody>
</table>
| *P = 0.03; $^1$P = 0.002; $^2$P < 0.001. $^3$≥1% in any group.

Table 6 Number and type of unresolved AEs and sexual or breast AEs of special interest at 12 months (end of treatment) and 18 months (after follow-up).

<table>
<thead>
<tr>
<th>AEs not resolved</th>
<th>Placebo (N = 246)</th>
<th>DUT-TAM FDC therapy (N = 243)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of events</strong></td>
<td>12 months</td>
<td>18 months</td>
</tr>
<tr>
<td>Total number of AEs</td>
<td>31</td>
<td>24</td>
</tr>
<tr>
<td>ED</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Ejaculation disorders</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Altered (decreased) libido</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Breast disorders</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Take home:

- Combination therapy appears to reduce sexual health by mostly affecting ejaculation
- Rates of ED, decreased libido, dizziness are equivalent to placebo
- Gynecomastia was not a major risk
- If libido decreases (8%) and and ejaculatory dysfunction (6%) occurs with combination therapy, only 50% improve by 6 months
Practice Changing Articles: 2018-2019

• Men’s Health: Reproductive Health / Erectile function (2)
• Functional urology: UTI, LUTS, incontinence (5)
• BPH: medical management (1)
• Endourology/Stones (1)
• Urology Practice
• Pediatrics
Background/Importance:

• Original studies have quoted risk of 50% recurrence rates between 5-10 years.
• When counselling patients we have lacked the ability to prognosticate symptomatic recurrences.
• Identifying a need to help inform decisions on initiating lifelong commitments to stone prevention the ROK nomogram was developed.

Design:

• Rochester Epidemiology Project - 3364 first time stone formers entire inpatient + outpatient records were manually reviewed between 1984-2012.
• 26 Candidate predictors were initially utilized, which in this final iteration has been reduced to 13.
FIGURE 2. Cumulative risk of symptomatic recurrence after the first, second, third, and fourth symptomatic kidney stone episodes.

TABLE 2. Final Model for Predicting Symptomatic Recurrence Using All Stone Formers and All Episodesa

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Hazard ratio (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic and stone episode characteristics for the final model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age at the last stone episode (per 10 y)</td>
<td>0.88 (0.84-0.92)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Body mass index at the last stone episode (per 5 kg/m²)</td>
<td>1.07 (1.02-1.13)</td>
<td>.004</td>
</tr>
<tr>
<td>Sex male</td>
<td>1.25 (1.09-1.44)</td>
<td>&lt;.002</td>
</tr>
<tr>
<td>Family history of kidney stones</td>
<td>1.36 (1.19-1.55)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Incident (asymptomatic) stone on imaging before the first confirmed stone episode</td>
<td>1.35 (1.08-1.69)</td>
<td>.008</td>
</tr>
<tr>
<td>Suspected kidney stone episodes before the first confirmed stone episode</td>
<td>1.75 (1.44-2.13)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Pregnant at the last stone episode</td>
<td>1.92 (1.20-2.75)</td>
<td>.005</td>
</tr>
<tr>
<td>Any stone found to be uric acid, brushite, or struvite</td>
<td>1.24 (0.92-1.66)</td>
<td>.16</td>
</tr>
<tr>
<td>Any stone found to be calcium oxalate monohydrate</td>
<td>0.89 (0.78-1.02)</td>
<td>.08</td>
</tr>
<tr>
<td>Imaging characteristics at the last stone episode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of stones in both kidneys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1.30 (1.11-1.51)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>1</td>
<td>2.03 (1.74-2.38)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>≥2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diameter of the largest kidney stone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No kidney stone or &lt;3 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-6 mm</td>
<td>1.25 (1.03-1.51)</td>
<td>.02</td>
</tr>
<tr>
<td>&gt;6 mm</td>
<td>0.96 (0.74-1.26)</td>
<td>.79</td>
</tr>
<tr>
<td>Pelvic or lower pole kidney stone</td>
<td>1.39 (1.18-1.63)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Ureterovesical junction stone</td>
<td>0.84 (0.74-0.96)</td>
<td>.01</td>
</tr>
</tbody>
</table>

*N=3699 episodes, C-index=0.687.

*aCharacteristics renal colic attributed to a stone, but no stone seen on imaging or documented as voided in the medical record.

Predict the risk of a future symptomatic kidney stone after the last symptomatic stone.

How many confirmed symptomatic kidney stone episodes with a passed or obstructing stone on imaging has this patient had (including the last episode)?

1
2
3
4+

Number of years since last confirmed symptomatic kidney stone episode?
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body mass index in kg/m² at last confirmed symptomatic stone episode?</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender?</td>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any prior stone found to be mostly calcium oxalate monohydrate with or without calcium oxalate dehydrate or hydroxyapatite?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Was imaging (CT scan, abdominal X-ray, or ultrasound) performed at the last symptomatic stone episode?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Number of stones in both kidneys?</td>
<td>0</td>
<td>1</td>
<td>2+</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diameter of largest kidney stone?</td>
<td>&lt;3mm or unknown</td>
<td>3-6mm</td>
<td>&gt;6mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptomatic stone seen at the ureterovesical junction?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stone seen in the renal pelvis or in the lower renal pole?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Results

Risk

The risk of another symptomatic kidney stone episode resulting in clinical care after 0 years since the last episode is 27% at 5 years and 43% at 10 years. Among patients with the same number of past confirmed stone episodes, the average risk for another symptomatic kidney stone resulting in clinical care from the time of the last episode is 17% at 5 years, and 28% at 10 years.
Take-home message:

• This 1minute tool helps guide patient counselling on future stone risk, and may help guide discussions on prevention, surveillance, etc.
• Has yet to be externally validated, so accuracy is unknown
Practice Changing Articles: 2018-2019

- Men’s Health: Reproductive Health / Erectile function (2)
- Functional urology: UTI, LUTS, incontinence (5)
- BPH: medical management (1)
- Endourology/Stones (1)
  - **Urology Practice** (1)
  - Pediatrics
Background/Importance:
• In response to the growing concern of narcotics use and dependency through over prescription the primary objective of this study was to determine the safety of narcotic free ureteroscopy, and the resulting impact on physician work load

Design: Prospective observational study, with historic matched cohort

Methods:
• Post-operative pain protocol was to include:
  • intraop ketorolac and B&O suppository
  • RX: diclofenac, and if stented tamsulosin/oxybutynin and Pyridium
52 cases were compared to a matched historic cohort of patients undergoing ureteroscopy.
Initial Experience with Narcotic-Free Ureteroscopy: A Feasibility Analysis

- 52 cases were compared to a matched historic cohort of patients undergoing ureteroscopy.
# Initial Experience with Narcotic-Free Ureteroscopy: A Feasibility Analysis

<table>
<thead>
<tr>
<th>Postoperative outcomes</th>
<th>nf-URS (52)</th>
<th>s-URS (52)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stent</td>
<td>44 (84%)</td>
<td>48 (92%)</td>
<td>0.23</td>
</tr>
<tr>
<td>Stent duration (average/median), days</td>
<td>9/5</td>
<td>6.6/5</td>
<td>0.34</td>
</tr>
<tr>
<td>Medications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diclofenac-50 mg</td>
<td>50 (96%)</td>
<td>0 (0%)</td>
<td>0.001</td>
</tr>
<tr>
<td>Tramadol-25 mg</td>
<td>5 (9%)</td>
<td>1 (1%)</td>
<td>0.09</td>
</tr>
<tr>
<td>Hydrocodone/oxycodone–acetaminophen</td>
<td>0 (0%)</td>
<td>52 (100%)</td>
<td>0.001</td>
</tr>
<tr>
<td>Discharge narcotic MED (average/median), mg</td>
<td>0/0</td>
<td>149/122</td>
<td>0.001</td>
</tr>
<tr>
<td>Tamsulosin</td>
<td>47 (90%)</td>
<td>46 (88%)</td>
<td>0.75</td>
</tr>
<tr>
<td>Oxybutynin</td>
<td>35 (67%)</td>
<td>43 (82%)</td>
<td>0.07</td>
</tr>
<tr>
<td>Pyridium</td>
<td>42 (80%)</td>
<td>39 (75%)</td>
<td>0.48</td>
</tr>
<tr>
<td>Postoperative phone call</td>
<td>9 (17%)</td>
<td>10 (19%)</td>
<td>0.8</td>
</tr>
<tr>
<td>Postoperative clinical consultation</td>
<td>5 (9%)</td>
<td>9 (17%)</td>
<td>0.25</td>
</tr>
<tr>
<td>Postoperative (additional) narcotic Rx</td>
<td>5 (9%)</td>
<td>9 (17%)</td>
<td>0.25</td>
</tr>
<tr>
<td>Additional Rx MED (average/median)</td>
<td>168/135</td>
<td>234/150</td>
<td>0.08</td>
</tr>
<tr>
<td>Our clinic</td>
<td>1 (1%)</td>
<td>0 (0%)</td>
<td>0.98</td>
</tr>
<tr>
<td>Local/alternate clinic</td>
<td>3 (5%)</td>
<td>6 (11%)</td>
<td>0.29</td>
</tr>
<tr>
<td>Emergency department</td>
<td>1 (1%)</td>
<td>3 (5%)</td>
<td>0.31</td>
</tr>
<tr>
<td>Stone-free rate (KUB/US-CT)</td>
<td>100% (16 patients)</td>
<td>77.4% (31 patients)</td>
<td>0.67</td>
</tr>
</tbody>
</table>
# Initial Experience with Narcotic-Free Ureteroscopy: A Feasibility Analysis

<table>
<thead>
<tr>
<th>Medications</th>
<th>nf-URS (52)</th>
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<td>5 (9%)</td>
<td>1 (1%)</td>
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</tr>
<tr>
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<td>0 (0%)</td>
<td>52 (100%)</td>
<td>0.001</td>
</tr>
<tr>
<td>Discharge narcotic MED (average/median), mg</td>
<td>0/0</td>
<td>149/122</td>
<td>0.001</td>
</tr>
</tbody>
</table>

- Discharge narcotic MED (average/median), mg
- Tamsulosin: 47 (90%) vs. 46 (88%)
- Oxybutynin: 35 (67%) vs. 43 (82%)
- Pyridium: 42 (80%) vs. 39 (75%)
- Postoperative phone call: 9 (17%) vs. 10 (19%)
- Postoperative clinical consultation: 5 (9%) vs. 9 (17%)
- Postoperative (additional) narcotic Rx: 5 (9%) vs. 9 (17%)
- Additional Rx MED (average/median): 168/135 vs. 234/150
- Our clinic: 1 (1%) vs. 0 (0%)
- Local/alternate clinic: 3 (5%) vs. 6 (11%)
- Emergency department: 1 (1%) vs. 3 (5%)
- Stone-free rate (KUB/US-CT): 100% (16 patients) vs. 77.4% (31 patients)
On multi-variate analysis: a preceding diagnosis of psychiatric disorders was associated with a 1.9x higher likelihood of filling additional procedures (p=0.05)
On multi-variate analysis: a preceding diagnosis of psychiatric disorders was associated with a 1.9x higher likelihood of filling additional procedures (p=0.05)
Take home message:

• Narcotic stewardship is an important part of our practice, and is becoming a priority at the national and provincial level.
• Reducing the use of narcotics in high volume surgery such as ureteroscopy appears to be safe and well tolerated by patients.
• Post-operative expectations and pain strategies need to be tailored to each patient.
Practice Changing Articles: 2018-2019

• Men’s Health: Reproductive Health / Erectile function (2)
• Functional urology: UTI, LUTS, incontinence (5)
• BPH: medical management (1)
• Endourology/Stones (1)
• Urology Practice (1)
• Pediatrics (3)
Background/Importance:
• Currently there are diverging opinions on genital surgery in Children with DSD and ambiguous genitalia
• Suggestions that childhood genitoplasties lead to long term quality of life issues
  • Loss of sexual sensitivity
  • Dyspareunia (clitoroplasty), coital difficulties (vaginaoplasty)
• Special interest groups have suggested early surgical intervention may be a human rights issue, questioning respect for autonomy and informed consent in otherwise healthy pediatric patients.
  • Some groups have called for a moratorium on gender surgery
• Little is known about raising female children with virilized genitalia and the effects of early vs delayed vs no intervention in todays society
  • QoL
  • Mental health
  • Socialization
A systematic review of psychosexual results after FG, in studies which compare controls:

- Later onset, lower frequency of sexual activity
- Higher rates of anorgasmia (upto 40%)
- Higher rates of bi/homosexuality
- Sexual dysfunction associated with clitoral sensitivity impairment

Heterogenous findings based on patient’s initial diagnosis, and surgical interventions

Complex mix of social, cultural, biologic, surgical, psychometric issues
In order to better understand parental decision making in FG in patients with congenital adrenal hyperplasia standardized questionnaires were used.

A Delphi model was used to create a questionnaire which was then administered to 16 consecutive families of Prader 3-5 children.

With 20 patient reported outcomes being measured top issues identified included:

- Normal physical / mental development
- Adrenal crisis
- Side-effects of medications

Following this included:

- Reproductive health
- Self image
- Sexual health

‘My child not having a voice in choosing surgery’ was the least important issue identified by parents.
• Modern options and management strategies are highlighted in a case series where a multi-disciplinary approach was used to counsel parents of complex DSD patients (mosaic karyotypes with, dysgenetic gonads, UG sinus and prominent phallus).

• Ultimately surgery involved:
  • Gonadectomy – to avoid future cancer risk
  • Vaginoplasty with preservation of phallic structures

• These options ensured that male reconstructive options remained should the child identify differently at a later date

• At approximately 2 years, parents reported positive development and wellbeing
Pediatric Female Genital Reconstructive Surgery

Take-home points

• Many issues need to be considered, and decision making processes should go through a well informed multi-disciplinary team

• Parents should be involved and educated to the long term physiologic and social/psychologic implications of surgical and non-surgical options

• Surgical approaches to reconstructive surgery should avoid destructive techniques, preserving as much natural tissue as possible in case subsequent procedures are required
Practice Changing Articles: 2018-2019

• Thank you to those who suggested articles and provided their input and insights
  • Dr. Rodrigo Romao
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  • Dr. Blayne Welk
  • Dr. Mitchell Humphreys
  • Dr. Ryan Flannigan