What is new in urinary incontinence: A practical look on the guidelines

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Diagnosis and Treatment of Overactive Bladder in Adults: AUA/SUFU Guidelines (2014)

Adult Urodynamics (2012)

OAB Guideline Updates

Patient Classification (compl vs. uncompl)

Diagnostic work-up

Treatment options
  downside of treatments
  novel drugs or managements

Horizon
Patient Classification
Complicated Patient:

*any abnormal condition and any co-morbidity with an impact on bladder control:*

- extremely severe symptoms
- young age patients
- mobility problems
- neurologic diseases
- uncontrolled diabetes
- pelvic pain
- fecal problems
- UTIs
- hematuria
- prior pelvic/vaginal surgery
- pelvic cancer or irradiation
- POP above grade II
- failed anti-muscarinic therapy
Diagnosis *(backbone is OAB is not a disease)*

History, PE, urinanalysis

*Additional tests:* Urine culture, PVR*, Bladder diary

Uncomplicated Patient:

Complicated Patient:

*Additional test:* Urinary US, PVR*, cystoscopy, UDS
Treatment (backbone is OAB is not a disease)

No treatment is a choice....

Multiple trials might be required for success which is changable in time

First line: behavioral, biofeedback,....

Second line: anti-muscarinics, Beta 3 adrenaoceptor agonists

Third line: onabotulinimtoxin A, PTNS, neuromodulation

Lines can change in order acc to patient.....
First line should be offered to all patients..... (Std, Grade B)

Weight loss alone is effective in 50%

6 month minimum.....

Second line may be given as a combination (Recomm, Grade C)
Second line:

**Pharmacologic treatment (Std, Grade B)**

*Anti-muscarinics*

*Side effects:*

- 20-60% dry-mouth (oxy)
- 7-17% constipation (darif)

*prefer ER over IR to decrease side effects (Std, Grade B)*

*TDS oxy less side effects (OTC for over 18) (Recomm, Grade C)*
Second line:

Pharmacologic treatment (Std, Grade B)

Beta3 adrenoceptor agonist

Side effects:

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>Placebo</th>
<th>Mirabegron (100mg)</th>
<th>Tolterodine (4mg)</th>
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<tbody>
<tr>
<td>dry mouth</td>
<td>1.6%</td>
<td>2.2%</td>
<td>9.5%</td>
</tr>
<tr>
<td>constipation</td>
<td>1.4%</td>
<td>1.6%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Hypertension</td>
<td>4.6%</td>
<td>3.4%</td>
<td>6.1%</td>
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</table>

Seems comparable to anti muscr sucecss but data is mostly on modest OAB patients...no data on frail patients.... (Grade B)
Pharmacologic treatment (Clin Princp –Exp Opinion)

Drugs can be and should be dose modified, interchanged as required

No literature on combination...

Antimuscarinics should not be used in narrow-angle glaucoma, gastrointestinal motility problems

Cessation of effective antimuscarinic should be the last resort in case of side effects

Caution on antimuscarinics use with TCA, antiParkinson or antiAlzheimer or antinausea drugs

Caution on frail patients (memory, cognitive or thermal regulation problems)
Third line:

**Intradetrusor Onabotulinumtoxin A (100IU) treatment (Std, Grade B)**

*FDA approved BoToxA 100 IU for refractory OAB*

*Patients should be informed about high PVR and possible CIC for up to 9 months....*

*High PVR and CIC 0 -43% and UTIs*

*Neurological side effects*

*Higher rate of side effects in diabetics and frail patients*

*Median time of success 8-12 months*

*Repeated injections...*
Third line:

PTNS (Recomm, Grade C)

- moderately severe symptoms
- multiple office visits

Sacral neuromodulation (Recomm, Grade C)

- for severe refractory symptoms or
- not candidates for pharmacotherapy and
- for the ones willing to undergo surgery
Horizon

Validation of urgency

Biomarkers

Nerve growth factors, PGs, Inflammatory factors like CRP or cytokines

Central NS

Functional MRI

Afferent signaling

Suburothelial sensor-transducers cells

Urothelial and detrusor pace-maker cells
The place of Urodynamics

OAB:

if an invasive treatment is planned (Option, Grade C)
if following bladder outlet surgery (Exp Opinion)
normal single UDS do not indicate bladder is normal (Clin Princp)

Neurogenic:

PVR is a must with UDS (Std, Grade B)
UDS is in the initial work up with relevant neurologic disorder (Recomm, Grade C)
PFS is in the initial work up with relevant neurologic disorder or in high PVR or with persistent symptoms (Recomm, Grade C)
EMG in relevant neurologic disorder or in high PVR or with symptoms (Recomm, Grade C)
The place of Urodynamics

**Stress UI:**

*UDS may be done if surgery is planned (Option, Grade C)*

*if UDS is done urethral function should be assessed (Recomm, Grade C)*

*if surgery planned PVR should be done (Exp Opinion)*

*if no stress UI is observed urethral catheter should be removed (Recomm, Grade C)*

*if POP is present, reduction should precede stress testing (Option, Grade C)*
The place of Urodynamics

LUTS:

UF may be used if emptying abnormality is anticipated (Recomm, Grade C)

PVR may be performed (Clin Princp)

UDS may be performed if DO or DU is anticipated before a surgery is planned (Expert Opinion)

PFS in men should be done if UD obstruction is noted (Std, Grade B)

PFS in women only if obstruction diagnosis is the reason for UDS (Option, Grade C)
Surgical Management of Female Stress UI:

Index Patients:

- SUI without POP
- SUI with POP

Treatment modalities:

- No needle suspension or anterior colporrhapy

Efficacy is defined by:

- The resolution and lack of recurrence in UI and prolapse
- Adverse events
Diagnostic Guideline in SUI

Standart:

- **Focused** history
- **Focused PE**
- SUI demonstration
- **PVR**
- Urinanalysis

**Recommendation for history**

- Severity
- Type of incontinence
- Impact of UI on lifestyle
- Patient expectations of treatment
**Diagnostic Guideline in SUI**

**Recommendation for further testing indications:**

- no definitive diagnosis
- OAB symptoms
- prior surgery
- neurogenic bladder signs
- negative stress test
- abnormal UA
- High PVR
- POP greater than Grade III
- dysfunctional voiding

**Recommendation as further testing:**

- Pad testing and bladder diary
- UDS
- Cystoscopy
- Imaging
Treatment Modalities in SUI

Retropubic Suspensions

- all types of suspensions
- open Burch
- laparoscopic Burch

Slings

- Autologous fascial sling
- Cadaveric sling
- Synthetic slings
  - bladder neck
  - midurethra

Mesh repair

Injectable agents

Artificial urinary sphincters
Treatment Guidelines for the Index Patient with SUI:

Counseling about nonsurgical options and risks of surgery (Std)

Urge incontinence with no SUI never undergo surgery (Std)

Synthetic slings never in urethral erosion, injury, diverticulum or fistula (recomm)

Intraop cystoscopy in all sling surgeries (Std)

All surgical options are viable although not equivalent (Option)

SUI surgery is possible in mixed incontinence (Option)

SUI surgery is possible with the prolapse surgery but tensioning is done only after prolapse repair (Recomm)
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<thead>
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<th>No Prolapse</th>
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<td>76%</td>
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Complications:

**Bladder injury** 3-8% (highest in midurethral and prolapse)

**Ureteral injury** 4% (upto 11% in lap)

**Mesh complications (FDA warning in 2008)**
- Upto 30% erosion in early series
- Urethral and bladder erosion 2-4% (bladder neck sling)

**UTI** 4-16%

**Bowel injury** 1%

**Vascular injury** (not documented but present in FDA MAUDE)

**Neurological injury** (seldom obturator nerve)

**Infectious complications**

**Death**
## Mortality rates

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<th>Description</th>
<th>Mortality rate</th>
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<tr>
<td>Overall</td>
<td>0.02-1.8%</td>
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<tr>
<td>SUI</td>
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<tr>
<td>Urogynecologic</td>
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<td>&lt;60 years</td>
<td>0.01%</td>
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<td>&gt;70 years</td>
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<td>Hysterectomy</td>
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<td>Prostatectomy</td>
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<td>Herniorraphy</td>
<td>0.41%</td>
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