Bowel and Bladder Management in MS

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October 3, 2013
Disclosures

• Received Honoraria: Bayer, Biogen Idec, EMD Serono, Novartis, Teva Neurosciences, Genzyme, MSS

• Nurse Advisor/Consultant: Bayer, Biogen Idec, EMD Serono, Novartis, Teva Neurosciences, Genzyme
What we’ll cover today…..

• Primer on neurogenic bowel/bladder?
• Review of bowel and bladder symptoms related to MS
• How do I manage neurogenic bowel and bladder problems?
Bladder Management
NARCOMS Survey 2005

• Of the 400,000 Americans with MS 75% report urinary incontinence, and 50% to 80% have voiding dysfunction
• Survey sent to 16,585 pts, 9,702 responded
• Survey included questions re: QOL, history of urologic evaluation and treatment, symptoms (frequency, urgency, leakage, nocturia)
NARCOMS Survey 2005

- 65% had OAB
- 46% had frequency, 43% urgency, 25% had leakage, and 48% had nocturia
- As OAB scores increased so did disability
- IC used by 25%, 10.8% used indwelling catheter, 1.3% used suprapubic catheter
NARCOMS Survey 2005

- Less than half (47%) had urologic evaluation, only half (51%) treated with anticholinergics
- New medications (vesicare, enablex and botox used in 4.6%, 2.9%, and 2.1%)
- We need to ask more frequently about bladder symptoms
Continence

is the ability to store urine in the bladder until a socially appropriate opportunity for bladder emptying (urination)
The Urinary System

- Detrusor muscle
- Urethra
- Sphincter muscles
How the bladder functions....

• The brain recognizes bladder fullness when there is 300 mls of urine in the bladder
• A normal bladder holds between 400-600 mls of urine
• Void 4-8 times a day
Neuroanatomy

MS causes lesions in the brain and spinal cord.

New plaque formation in a different area of the brain and spine means there is no one pattern of voiding dysfunction.
In MS......

2-15% report voiding dysfunction at initial presentation
50-80% experience voiding dysfunction at some point during the disease

Routine re-evaluation required
Neurogenic Bladder

• Inability to store (62%)
• Inability to empty (20%)
• Combined dysfunction - detrusor sphincter dyssynergia (DSD) (25%)
Neurogenic Bladder

• Worsening bladder dysfunction with increasing spinal cord involvement
• Spasticity and reduced lower limb mobility almost inevitably accompany bladder disorders in MS
• Impaired mobility and urge incontinence present very real problem
Inability to Store

- Uninhibited detrusor contractions
- Small capacity bladder
- Sphincter dysfunction
- Symptoms of urgency, frequency, nocturia, urge incontinence
- Post void residual (PVR) < 100cc
Inability to Empty

- Detrusor dysfunction (hypotonic or atonic bladder with lack of sensory awareness)
- Symptoms of urgency, hesitancy, incomplete emptying, nocturia, incontinence, UTI
- Post void residual (PVR) > 100 cc’s
Combined Dysfunction

- Detrusor-sphincter dysynergia (DSD)
- Symptoms of urgency, frequency, involuntary urine, nocturia, UTI, stuttering “stop and go”
- PVR variable amounts
- Diagnosed only by urodynamics
Impact on QOL....

- Commonly experience embarrassment
- Social constraints
- Depression
- Skin break down
- Urethral and perineal erosions
Team Approach

• Nurses
• Physical therapist
• Occupational therapist
• Social worker
• Health care aides
• Nurse continence advisor
• Family physician
• urologist
Assessment

- Continence history
- Fluid intake
- Bowels
- Medical history
- Medication
- Functional assessment
- Physical assessment
Behavior Modification

- Adjustment of fluid intake and type
- Environmental changes
- ADL’s
- Effective bowel regime
- Smoking
Treat the disorder....

- Oral anticholinergics
- Oral antispasmodics
- Botox
- IC
- Indwelling catheter
- Supra-pubic catheter
- Cannabinoids
<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Trade name</th>
<th>Dose supplied</th>
<th>Recommended dose</th>
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</thead>
<tbody>
<tr>
<td>Oxybutnin</td>
<td>Generic</td>
<td>2.5 mg, 5 mg, 10 mg</td>
<td>5 mg 2-3 times per day, up to 4 times</td>
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<tr>
<td>Transdermal oxybutnin</td>
<td>Oxytrol gelnique</td>
<td>3.9 mg</td>
<td>3.9 mg per day (twice weekly)</td>
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<tr>
<td></td>
<td></td>
<td>10% sol’n (100mg)</td>
<td>Daily</td>
</tr>
<tr>
<td>Oxybutynin ER</td>
<td>Ditropan XL</td>
<td>5 mg, 10 mg</td>
<td>Dose escalation from 5 mg to 30 mg daily</td>
</tr>
<tr>
<td>Tolterodine IR</td>
<td>Detrol</td>
<td>1 mg, 2 mg</td>
<td>1 or 2 mg twice a day</td>
</tr>
<tr>
<td>Tolterodine ER</td>
<td>Detrol LA</td>
<td>2 mg, 4 mg</td>
<td>2 or 4 mg once a day</td>
</tr>
<tr>
<td>Solifenacin</td>
<td>Vesicare</td>
<td>5 mg, 10 mg</td>
<td>Dose escalation from 5 to 10 mg once a day</td>
</tr>
<tr>
<td>Darifenacin</td>
<td>Enablex</td>
<td>7.5 mg, 15 mg</td>
<td>Dose escalation from 7.5 to 15 mg once daily</td>
</tr>
<tr>
<td>Trospium</td>
<td>IR</td>
<td>20 mg</td>
<td>20 mg twice daily</td>
</tr>
<tr>
<td></td>
<td>Sanctura XR</td>
<td>30 mg</td>
<td>30 mg once daily</td>
</tr>
<tr>
<td>Fesoterodine</td>
<td>Toviaz</td>
<td>4 mg, 8 mg</td>
<td>Dose escalation from 4-8 mg once daily</td>
</tr>
</tbody>
</table>
Anticholinergic MOA

- Block nerves that control bladder muscle contractions
- Allow for relaxation of the bladder smooth muscle
- Increase bladder capacity
- Delay initial urge to void which increases the interval of time between voids (decreases frequency)
Side Effects

• Dry mouth, nose and throat
• Blurred vision
• Dizziness, drowsiness, and confusion
• Nausea and constipation
• May exacerbate the tendency of the bladder to empty incompletely (monitor PVR)
Inability to Empty

• Alpha blockers relax the smooth muscle of the opening of the bladder
• Crede manoeuvres or abdominal straining not effective since urethral relaxation the problem
Inability to Empty

- Hytrin (alpha blocker)
- Urecholine (stimulates muscarinic receptors)
- Prazosine (alpha blocker)
- Baclofen, tizanidine (antispasticity agents)
- Desmopressin acetate - DDAVP (anti-diuretic)
What You Need to Know.....

• Adequate fluid intake is 1.5 - 2 litres per day (water is best, decaf tea or fruit juice OK)
• Urge to void occurs about 1 1/2 - 2 hours after drinking something
• Caffeine, aspartame, smoking and alcohol are bladder irritants
• Limiting fluid intake is harmful
What You Need to Know…..

• Drink fluids all at once. If you sip, sip, sip you will feel the urge more often
• Try to void about 1 1/2 - 2 hours after you drink
• Stop drinking fluids about 2 hours before bedtime
• Void right before bedtime
What You Need to Know.....

• It is not normal to leak urine, wake up more than once at night to void, or have frequent UTI’s
• Symptoms of UTI’s
• Effect of UTI’s on MS symptoms
• Importance of early treatment of UTI’s
What HCP need to know....

- Identify contributing factors
- Symptoms of UTI’s
- Effect of UTI’s on MS symptoms
- Importance of early treatment of UTI’s
Consider a Urology Consult

- Unsuccessful first line treatment interventions
- Frequent UTI’s
- Use of indwelling catheter
- Lack of resources at your centre
Bowel Management
Bowel Dysfunction in MS

- Constipation
- Fecal incontinence
- Mixed syndrome: constipation with fecal incontinence
The GI System

- Colon
- Rectum
- Anus
- Internal sphincter
- External sphincter
Constipation: contributing factors

- Weakened abdominal muscles
- Decreased mobility
- Inadequate fluid intake
- Insufficient dietary fiber
- Medications
Fecal Incontinence: contributing factors

• Sphincter dysfunction
• Constipation with fecal impaction overflow
• Decreased rectal sensation
• Medications
• Dietary irritants (caffeine, alcohol, lactate, glutens)
• Infection
• Impaired mobility/access
Contributing MS symptoms

- Fatigue
- Pain
- Mobility impairment
- Cognitive deficits
- Bladder dysfunction
What is the Impact?

- Social isolation: risk of fecal incontinence, control of flatulence, discomfort-bloating
- Family/caregiver stress: perception of normal bowel habits, assisting patient with bowel care
- Psychological factors: anxiety/worry
- Health status: inadequate nutrition, misuse of medication
Assessment of Bowel Function

• Need to routinely ask about bowel function
• Change in bowel habits (frequency/incontinence)
• Change in stools (solid/liquid)
• Bloating/gas (at rest, exercising, coughing)
• Impact on daily routines (schedule bowel routine)
• Use of pads
Health Assessment

- Bowel record
- Concomitant disorders
- Medications
- Life style
- Contributing factors (caffeine, alcohol)
Bowel Management Interventions

- Goals
- Education
- Behavioral strategies
- Pharmacological
- Interventional approach
Goals

• What are your expectations?
• Family or caregiver goals?
• Are these realistic?
• Do they conflict with the practitioner?
• How will this impact your QOL?
Education

Understand the rationale of management strategies

“Yeah, I understood all of the discharge instructions, but I’m not Nikki Stevens and I didn’t get a tummy tuck.”
Behavioral Strategies

- Establish regular bowel routine
- Time, place, days of week
- Gastric reflex greater after a meal; breakfast
- Valsalva maneuvers/posture - “squat” position, seated with flexed knees
- Mechanical rectal wall stimulation
Behavioral Strategies

• Adequate fiber and fluid intake (15-30 grams of fiber per day, drinking warm fluids)
• Well balanced meal at regular intervals and relaxed setting
• Dietician (meal plan and recipes)
## How Much Fiber is That?

<table>
<thead>
<tr>
<th>Food</th>
<th>Fibre content in grams</th>
</tr>
</thead>
<tbody>
<tr>
<td>whole grain bread (whole wheat, rye, multigrain) - 1 slice</td>
<td>2</td>
</tr>
<tr>
<td>white bread — 1 slice</td>
<td>0.5</td>
</tr>
<tr>
<td>brown rice — ½ cup</td>
<td>2</td>
</tr>
<tr>
<td>white rice — ½ cup</td>
<td>0.5</td>
</tr>
<tr>
<td>whole wheat pasta — 1 cup</td>
<td>4</td>
</tr>
<tr>
<td>regular pasta — 1 cup</td>
<td>1</td>
</tr>
<tr>
<td>cereals:</td>
<td></td>
</tr>
<tr>
<td>whole grain flakes (bran) — ¾ cup</td>
<td>4</td>
</tr>
<tr>
<td>regular flakes and crispies:</td>
<td>traces</td>
</tr>
<tr>
<td>corn, rice — ¾ cup</td>
<td></td>
</tr>
<tr>
<td>oatmeal — ¾ cup</td>
<td>2</td>
</tr>
<tr>
<td>legumes such as baked beans, lentils,</td>
<td>5</td>
</tr>
<tr>
<td>chick peas, kidney beans — ½ cup</td>
<td></td>
</tr>
<tr>
<td>fruits and vegetables — 1 piece or ½ cup</td>
<td>2</td>
</tr>
</tbody>
</table>
Fiber Intake

- Improves stool consistency and transit time
- Introduce gradually (decrease risk of bloating, flatulence, diarrhea)
- Raw vegetables, fruit, whole grains, legumes, nuts
- Poor tolerance, availability or cost
Activity and Biofeedback

Increasing physical activity based on ability:
- physiotherapy
- mobility/transfers
- exercise (strengthening pelvic floor and abdominal muscles)
Activity and Biofeedback

• Improved rectal and pelvic floor function
• Specific to constipation or fecal incontinence
• Need several sessions with trained therapist
• Mild to moderate disability more likely to benefit
Abdominal Massage

- Technique – stroking, effleurage strokes, palmar kneading and vibration
- Increase intra-abdominal pressure may help rectal loading, autonomic reflex and bowel sensation
- Increase digestive secretions and peristalsis
- Requires time to be effective
- Difficult to self-administer
- Used as adjunct therapy
Pharmacologic

• Stool softeners
• Osmotic laxatives (lactulose, milk of magnesia)
• Stimulants (senna, castor oil, bisacodyl)
• Bulk-forming agents (metamucil, prodiem)
• Suppositories
Pharmacologic

- Enemas (fleet or tap water)
- Mini enema
- Loperamide, anticholinergics to slow colonic motility
Interventional

- Surgical (sacral nerve stimulation)
- Diversion (colostomy, ileostomy)
Thank You
Resources

- www.pelvichealthsolutions.ca
- www.continenceproductadvisor.org