

Conservative Management of Post Prostatectomy Urinary Incontinence
Annual Symposium of the Argentine Urological Society
June 15, 2012 Buenos Aires Argentina
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Conservative management for Post Prostatectomy Urinary Incontinence (PPUI)

- Pelvic floor muscle (PFM) exercises (Moore 1999, Nahon 2006, Campbell 2012)
- Bladder training for residual overactive bladder (OAB) (Wallace 2009)
 - Bladder training compared to no treatment – favors bladder training but no statistically significant difference where found in outcomes
 - Combined bladder training with PFM exercises – statically significant improvement in quality of life (Burgio 2011)
- Electrical stimulation – no significant difference when comparing electrical stimulation to PFM exercises alone (Moore 1999, Wille 2003)
- Lifestyle interventions
 - Fluid modifications for residual OAB
 - Inconsistent results of the relationship of caffeine to OAB, but it does appear decreasing caffeine can decrease UI in some (Milne 2008, Wyman 2009)
 - Decreasing fluid intake by 25% significantly decreases frequency, urgency, and UI in patients with OAB (Milne 2008) – even more than decreasing caffeine
 - Obesity - associated with OAB (Milne 2008, Wyman 2009) and weight loss significantly decreased urge urinary incontinence (Subak 2005)
 - Constipation (Wyman 2009)
 - Higher rates of constipation in men with OAB
 - Resolution of constipation significantly improves urgency and frequency in older patients (Charach 2001)
 - Smoking (Wyman 2009)
 - Increase intra-abdominal pressure with coughing contributes to stress UI
 - Nicotine has been shown to induce increased detrusor activity in cats
 - Smoking cessation can decrease lower urinary tract symptoms (LUTS) in men
- Collection and containment – pads, diapers, penile clamp (Nahon 2006)
- Functional mobility - as needed in patients with physical disability
 - Gait and balance training
 - Removal of environmental barriers

Is conservative management effective in PPUI?

- Meta-analysis / systematic review – weak evidence that PFM exercises decrease PPUI especially short term (Moore 1999, Nahon 2006)
- Cochrane review - overall benefit from PFM training versus control for reduction of PPUI (1 year after surgery 10% in PFM exercise group still had UI, versus 32% in the control groups). The findings should be treated with caution, as most trials were of poor to moderate quality with wide confidence intervals. (Campbell 2012)
- PFM training should be offered as a first line treatment for PPUI (Van Kampen 2000, Peyromaure 2002)

- Post micturition dribbling
 - Significant decrease in UI with PFM training (Chang 1998, Porru 2001, Paterson 1997)
 - Bulbar urethral milking - Patient places his fingers behind the scrotum and gently pushes forward and up to empty the bulbous urethra (Stephenson 1977) did provide some added benefit (Paterson 1997, Dorey 2006)
- UI after radiation therapy for prostate cancer – PFM exercises, bladder training and patient education significantly decreased LUTS and increased quality of life. (Faithfull 2011)
- Adverse events – very few adverse events are published, men should delay PFM exercises if bleeding returns or pain occurs

Difficulties in application of research on PFM exercises for PPUI

- Overall studies are of fair to moderate quality often with small numbers, poor outcomes measure, and no measure of PFM function
- Clinical practice in PFM training for male UI is based on research on female UI
- Questions remain on the correct components and structure of the PFM training program

Which patients will benefit most from conservative management of PPUI?

- Some clinicians advocate all men after prostate surgery receive PFM training and other conservative interventions as needed
- Other clinicians select only certain patients
- No research documenting any pre or post-operative conditions associated with better outcome in conservative management
- Increased preoperative thickness of PFM (measured by MRI) is associated with better post-operative continence. (Song 2001)

Rectal assessment of PFM function (Dorey 2006)

- PFM training program is based on results of skilled rectal PFM assessment
- Similar to vaginal palpation of PFM function – usually palpating in a posterior location
- Assess for
 - Strong tight contraction and anterior deflection of the examining finger
 - Penile retraction and testicular lift - elevation of the penis and testicles upward gives indication of superficial muscle function important in maintaining erection (Dorey 2006)

Components of PFM training program

- Based on research on female UI
- Overflow facilitation and PFM exercises (Parekh 2003)
- Strong post void “squeeze out” PFM contraction to empty the bulbous urethra and avoid post micturition dribble (Dorey 2004)
- Groups support and PFM exercises resulted in significant decrease in PPUI over verbal instruction in PFM exercises alone. (Zhang 2007)
- Biofeedback – no significant difference when comparing biofeedback to PFM exercises alone (Floratos 2002, Mathewson-Chapman 1997, Wille 2003, Goode 2011)

When to start PFM exercises?

- Pre-operatively - one day to one month before surgery (Bales 2000, Sueppel 2001, Centemero 2010, Parekh 2003, Burgio 2006, Tienforti 2012)
 - Pre and post-operative PFM training versus post-operative PFM training only – significant decrease PUI in the group that received pre-operative exercises (Sueppel 2001, Centemero 2010)
- Some professionals allow gentle PFM exercises while the catheter is in (Dorey 2006)
- Immediately after catheter removal (Burgio 2006, Van Kampen 2000, Chang 1998)
- 7 days after catheter removal (Manassero 2007, Mariotti 2009)
- Most studies simply report “after catheter removal”
- 6 weeks after surgery PFM exercises are not effective (Glazener 2011, Franke 2000)
- Intensive conservative management can decrease long standing UI (Moore 2003)

How often and how many - No consensus

- 2 visits per week for 6 weeks (Mariotti 2009)
- 1 visits per week for 4 weeks (Porru 2001)
- Every other week for 8 weeks (Goode 2011)
- 5 visits over 3 months (Parekh 2003)
- 5 visits over 1 year (Sueppel 2001)
- All studies advocate home exercises between clinic visits

Erectile dysfunction (ED)

PFM exercises – conflicting evidence

- Cochrane review - no significant difference in erectile function (Campbell 2012)
- Dorey 2006 states 8 trials using PFM exercises show increase penile rigidity and cure or improvement in erectile function. (Dorey 2006)
- Venous leaking - may selectively help men who have trouble maintaining an erection (Van Kampen 2003)
- Improved ED when PFM training is started immediately after catheter is removed (Lin 2012).
- PFM training should focus on ischiocavernosus and bulbocavernosus contractions (Wespes 1990, Claes 1993, Claes 1995)
- Randomized trial comparing surgery to PFM training in men with ED related to venous leaking - 42% in the PFM exercise group were satisfied with the outcome and refused surgery (Claes 1993)

Lifestyle modifications

- General exercise – increased physical activity has been shown to be associated with better erectile function (Hsiao 2011)
- Reduction in alcohol intake and smoking and decrease obesity (Dorey 2006)
- Avoid long distance cycling – compression on the pudendal nerve can decrease erections (Dorey 2006)

Exercises for men undergoing radiation therapy and androgen deprivation therapy

- Weight bearing exercises to minimize the effects of osteoporosis for males undergoing androgen suppression therapy is suggested by many professionals (Lebret 2010, Bae 2044)
 - Research in progress to clarify the role of exercise (Galvao 2011, Lee 2012)
- Resistance and aerobic exercises to mitigated fatigue and increase quality of life after radiation therapy for prostate cancer (Segal 2009)

Role of the Physical Therapist / Physiotherapists / Kinesiologists

- Many practitioners provide conservative management - Physical Therapists are well suited to train skeletal muscles all over the body and are thus one of the professionals involved in PFM training
- Examine, assess, and evaluated the function of the skeletal muscles of the pelvic floor
- Provide intervention for the impairments found

Resources for further learning in conservative management

- International Continence Society – support and education for professionals in the field of continence <http://www.icsoffice.org>
- National Association for Continence – Patient and professional information in Spanish with good links to other sites with information in Spanish. <http://www.nafc.org/espanol>
- Evidence-Based Physical Therapy for the Pelvic Floor: Bridging Science and Clinical Practice. Bo K, Berghmans B, Morkved S, Van Kampen M, eds. Philadelphia: Elsevier; 2007.
- The Pelvic Floor eds Carriere B, Markel Feldt C. Thieme Publishers New York. 2006.
- Therapeutic management of incontinence and pelvic pain. 2nd edition. Eds Haslam J, Laycock J. Springer 2008

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