Nursing Management in Female Urinary Incontinence

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Prevalence of Female Incontinence


- National Health and Nutrition Examination Survey
  51.5% female have urinary incontinence

- 49.5% female have urinary incontinence in 2001-2002
- 53.4% female have urinary incontinence in 2007-2008
## Prevalence in Hong Kong

<table>
<thead>
<tr>
<th></th>
<th>Pang 2005</th>
<th>Brieger 1996</th>
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<tbody>
<tr>
<td><strong>SUI</strong></td>
<td>33.9%</td>
<td>21%</td>
</tr>
<tr>
<td><strong>UUI</strong></td>
<td>15.5%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>19.3%</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Voiding Difficulty</strong></td>
<td>7.6%</td>
<td>13%</td>
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</tbody>
</table>
Risk Factors

- Age
- Pregnancy
- Childbirth
- Menopause
- Hysterectomy

- Obesity
- Chronic constipation
- Cognitive impairment
- Occupational risks e.g. manual worker
- Family history and genetics
Transient causes of urinary incontinence

- Delirium
- Infection (urinary tract)
- Atrophic vaginitis
- Pharmaceuticals
- Psychological
- Excess fluid
- Restricted mobility
- Stool impaction (and constipation)
Types of urinary incontinence

- Stress urinary incontinence
- Urge urinary incontinence
- Mixed urinary incontinence
- Retention with overflow
Assessment

- History
- Physical examination
- Basic Investigations
- +/- Urodynamic Studies
History

- Main complaint, duration, frequency
- Severity, effect on quality of life
- Past medical history: neurological, psychological, medication
- Past surgical history
- Past obstetrical/ gyn history
- Access to toilets, bed pans
- Social factors eg living arrangements, social contacts, caregiver involvement
Physical examination

• Bladder distension
• Pelvic examination
• Pelvic organ prolapse
• Cough test
• Rectal exam
• Mobility
• Mental state
Investigation

- Urine for culture
- Uroflowmetry
- Check for post void residual
- Pad test
- Voiding diary / frequency volume chart
- Urodynamic study
Nursing management
Nursing management

**General measures / advices**

- Treat UTI / constipation
- Maximize mobility
- Avoid activities that can increase intra-abdominal pressure
- Improve toilet access
- Clothing modification
- Reduce weight if obese
- Advise on using continence pads
- Assess medications
Nursing management

Specific Therapeutic Measures

- Pelvic floor exercise
- Mechanical device / Electrical / Magnetic stimulation
- Bladder retraining
- Clean self intermittent catheterization (CISC)

Medical management

- Drug therapy
- Surgery
Pelvic floor exercise

• strengthen pelvic floor muscle and increase urethral resistance
• helps to reduce urine loss associated with stress incontinence
• helps to strength pelvic floor muscle after birth
• helps to maintain pelvic muscle strength after menopause
Pelvic floor exercise

- Skills
- Assess for suitability and motivation
- Clear explanation
  - Importance of motivation and regular exercise
  - Avoid / decrease bear down activities
  - Can be done in any time, place and position
  - NOT to use abdominal muscle / hold breath while doing exercise
- Individualized teaching
- Regular FU and supervision
Vaginal cones

Weighted cones in the vagina to strengthen pelvic floor muscle

Single blind, randomised controlled trial of pelvic floor exercises, electrical stimulation, vaginal cones, and no treatment in management of genuine stress incontinence in women (BØ et al, 1999) – 6 mths

- PFE (N=29), electrical stimulation (N=32), vaginal cones (N=29), no treatment (N=32)
- Compliance (PFE-93%, electrical stimulation (ES)-75%, vaginal cones (VC)-78%)
- Adverse effect (no S/E on PFE, ES-(1 tenderness & bleeding, 1 discomfort, 8 c/o motivation problem and difficulties in using the stimulator), VC-(1 abd pain, 2 vaginitis, 1 bleeding, 14 motivation problems and trouble in using cones)
- 1° outcome – pad test and 5 point scale (unproblematic, minimal problem, moderate problem, problematic, very problematic)
- 2° outcome
  - 3 day leakage episodes
  - 24 hr pad test
  - social activity index (VAS) After Rx → rate 5 pt scale (worse, unchanged, improved, almost continent, continent)
  - leakage index (always, often, sometimes, seldom, never)
  - Pelvic floor muscle function and strength (vaginal balloon catheter connected to a pressure transducer)
  - Maximum urethral pressure (MUCP) can maximum urethral closure pressure with a fibreoptic microtransducer
- PFE group When compared with control group, significant differences in change of pad test, episodes of leakage in 3 days, social activity index, leakage index and pelvic muscle strength
  - No significant changes in 24 hr pad test, maximum urethral pressure or MUCP
  - There was 14 no. stated condition was unproblematic
- ES group
  - When compared with control group, significant differences in for episodes of leakage in 3 days and leakage index
  - No significant changes in other outcomes
  - There was 3 no. stated condition was unproblematic
- VC group
  - When compared with control group, significant differences in leakage index and social activity index
  - No significant changes in other outcomes
  - There was 2 no. stated condition was unproblematic

Conclusion – PFE more effective than ES, VC and no Rx. PFE is safe and effective and showed be offered as 1st choice of Rx for GSI
Biofeedback

- Provides awareness of the physiological action of the pelvic floor muscles by visual, tactile or auditory means

**Biofeedback and Pelvic Floor Exercise for rehabilitation of urinary stress incontinence (Aksac et al, 2003) – 2 mths Rx**
- PFE taught by digital palpation (N=20), only biofeedback (N=20), no exercise (N=10)
- Significant improvement in SUI in PFE and biofeedback group
- PFM strength with perineometry of biofeedback group was higher than digital palpation group

**Effect of adding biofeedback to pelvic floor muscle training to treat urodynamic stress incontinence (Morkved et al, 2002) – 6 mths Rx**
- PFE only (N=50), PFE + biofeedback BF-106 biofeedback (N=53)
- Outcome measures: 5-point scale, 48 hr pad test, leakage index, social activity index, pelvic floor muscle function and strength
- Significant improvement in outcomes within both groups
- No statistically significant difference between two groups
## Conservative management

### Comparison of Availability and Efficacy

<table>
<thead>
<tr>
<th>Method</th>
<th>Availability</th>
<th>Efficacy</th>
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<tbody>
<tr>
<td>Pelvic floor contractions</td>
<td>100%</td>
<td>74%</td>
</tr>
<tr>
<td>Interferential therapy</td>
<td>93%</td>
<td>63%</td>
</tr>
<tr>
<td>General exercises</td>
<td>60%</td>
<td>38%</td>
</tr>
<tr>
<td>Faradism</td>
<td>54%</td>
<td>45%</td>
</tr>
<tr>
<td>Perineometer</td>
<td>26%</td>
<td>57%</td>
</tr>
<tr>
<td>Vaginal cones</td>
<td>16%</td>
<td>59%</td>
</tr>
<tr>
<td>Interferential direct current</td>
<td>4%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Versi 1989
Magnetic therapy

- Stimulate the pelvic floor / or sacral roots by placing them on within electromagnetic field

Electromagnetic stimulation of the pelvic floor for stress urinary incontinence (Gelling et al 2009) – 2 mths Rx, N=70

- Active therapy vs sham therapy (put a thin deflective aluminium plate to prevent penetration of the magnetic field into patient)
- Primary outcome (20 mins pad test)
- Secondary outcome (3-day bladder diary, 24hr pad test, no. of pad used and PFM strength, I-QOL and KHQ scores)
- There were sign. improvement in the primary and secondary outcome in active gp however these improvements were not stat. significant when compared with the sham group.
Conclusion

• Biofeedback, cones therapy, electrical stimulation and magnetic therapy can help in reducing stress urinary incontinence

• Pelvic floor exercise is the most available and effective exercise in conservative management in stress urinary incontinence
If patient opt for surgery in USI
In the educational talk

- Pre-op
  - Risk and Cx of TVT as shown in the fact sheet
  - Wound site
  - Good drinking habit e.g. 6-8 cups/ day (250ml/ cup), drinking duration ~ 2+ hourly
  - Avoid void by straining
  - Preparation on admission e.g. minor C/F, visiting hour, medication
  - Introduce patients with similar surgery for mutual support
In the educational talk

- Post-op
  - Diet
  - Foley’s catheter
  - Vaginal gauze roll in situ
  - Good drinking habit after foley’s catheter is off
  - How to use the measuring hat
  - RU checking by bladder scanner
  - Possibility of decrease stream of urine
  - Wound care
  - PVB
Post-op advice on discharge

- Reinforce
  - Good drinking habit e.g. 2+ hourly, ~250ml/ time x 6-8 times/ day
  - PVB
  - Avoid straining / heavy lifting
  - Maintain normal bowel habit
  - Avoid sexual activity / swimming / spa x 2 mths
  - Follow up
  - Call back clinic if voiding problem occurs
Nursing management

Specific Therapeutic Measures

- Pelvic floor exercise
- Mechanical device / Electrical / Magnetic stimulation
- Bladder retraining
- Catheterization

Medical management

- Drug therapy
- Surgery
Bladder retraining

- to restore continence by re-educating the bladder to a ‘normal’ or improved pattern of voiding
- to avoid episodes of incontinence by planned voiding regime
- Monitor by frequency volume chart

- Regular drinking 1.5-2 L fluid/ day ~ 6-8 cups/ day
- limit intake of fluid which irritate the bladder, e.g coffee, tea, alcohol
- avoid going to toilet ‘just in case’
- deferment – PFE, distraction, perineal pressure
Clean intermittent self catheterization

- To regain bladder tone if retention of urine is caused by reversible cause
- To avoid overdistention of bladder and to prevent complications caused by overdistension
Clean intermittent self catheterization

Nelaton catheter

Suction catheter
Clean intermittent self catheterization

Advices to patients:
• Void before CISC
• Avoid overdistension
• Fluid intake at least 2L/ day, if not C/I
• Observe for S/S UTI
• Record in frequency volume chart
• Regular follow up
• Provide contact
Conclusion

- Urinary incontinence is common
- Nurses can provide first-line conservative management
- Nurses also play an important role in pre and post operative education
Thank You