Clinical Implications of Pelvic Floor Dysfunction

Andrew I. Sokol, M.D.
Associate Professor, Ob/Gyn and Urology
Georgetown University School of Medicine
Associate Director, Minimally Invasive Surgery
Section of FPRMS
MedStar Washington Hospital Center

Disclosures

- None

PFD Quiz

As a woman, your chance of getting a PFD is:
A. 1 in 3
B. 1 in 4
C. 1 in 5

The number of adults with bowel incontinence is:
A. 5 million
B. 12 million
C. 18 million

Bladder control problems only occur in postmenopausal women:
A. True
B. False

Risks for POP include:
A. Age
B. Giving birth
C. Smoking and chronic lung disease
D. Lifestyle factors
E. All of above

Objectives

1. Address normal anatomy and function of pelvic floor
2. Review risk factors for pelvic floor dysfunction (PFD)
3. Outline clinical impact of PFD
Pelvic floor functions

- Maintained by *interplay* of muscles, nerves, organs, connective tissue
  - Supports pelvic organs
  - Allows passage of urine/stool and maintain continence
  - Enables sex
  - Allows parturition

Pelvic floor dysfunction (PFD)

1. Pelvic organ prolapse (POP)
2. Urinary incontinence (UI)
3. Anal incontinence
   • Constipation, pain, and sexual dysfunction also related to PFD
   • *Symptoms important part of definition for PFD*¹

PFDs are common

- Prevalence increasing¹*¹
  - POP: 3→5 million US women by 2050²
- *Lifetime risk POP/SUI surgery 20.2%*
  - POP surgery 13.7%³
  - Comparative risks
    • Colon cancer 4.8%
    • Lung cancer 6.3%
    • Breast cancer 14.8%
- *1 of 3 women experience PFD*

*¹Prevalence depends on definition used, population studied, etc
²Hendrix SL, AJOG 2002
³Wu, Obstet Gynecol 2009
⁴Wu, Obstet Gynecol 2014
Economic impact of PFDs

- “Costs” differ based on perspective
  - Individual, societal, healthcare, familial
  - Direct (goods, services, resources) vs indirect (loss of future productivity)

- UI projected to consume $72 billion by 2015
  - Breast CA $5 billion in 2000

- POP $1 billion direct cost inpt surgery in 2000
  - Limited data for indirect costs

PFDs exert considerable economic burden and are likely underestimated

POP defined as descent of one or more of the anterior vaginal wall, posterior vaginal wall, uterus or apex

Risk Factors

- Predisposing
  - Genetics, race, connective tissue defects

- Inciting
  - Pregnancy, childbirth, myopathy, neuropathy
  - Hysterectomy

- Promoting
  - Obesity, smoking, pulmonary disease, constipation and chronic straining

- Decompensating
  - Aging, menopause, debilitation, and medications

Risk Factors

• Predisposing
  - Genetics, race, connective tissue defects

• Inciting
  - Pregnancy, childbirth, myopathy, neuropathy
  - Hysterectomy

• Promoting
  - Obesity, smoking, pulmonary disease, constipation and chronic straining

• Decompensating
  - Aging, menopause, debilitation, and medications


Hysterectomy: a risk factor for POP?

• >600,000 per year in US¹

• Hyst assoc with ↑ risk later POP surgery²
  – Multiparous women highest risk (HR 11)
  – Reoperations for POP 11.6% → 20.2% if no apical suspension during hysterectomy for POP³

¹Clarke-Pearson DL. Obstet Gynecol, 2013
²Altman D. AOG 2008
³Eilber KS. Obstet Gynecol 2013

POP symptoms

1. Sensation of bulge
   – Most common symptom
   – Symptoms start > hymen

2. Heaviness

3. Urinary or bowel symptoms
   – Voiding dysfunction
   – Defecatory dysfunction
   – Incontinence

4. Interference with sex
   – Physical (pain, blockage)
   – Emotional (feeling unattractive)

Not all women with POP symptomatic. Decision to treat driven by symptoms and bother
Urinary incontinence

- Involuntary loss of urine
  - ICS definitions of incontinence based on symptoms
- Risks for SUI
  - VD 2x risk of Cesarean
  - Obesity
  - Smoking
- Risks for UUI
  - Age

Urinary incontinence impact

- Affects >17 million people
- Negatively impacts QOL
  - Mental health
    - Depression
    - Anxiety
  - Physical functioning
  - Social functioning
    - Bathroom mapping
    - Avoiding social settings

Anal incontinence

- Inability to control passage of flatus, liquid or solid stool
- Mean age of onset: 51
- Etiology multifactorial
  - Obstetric anal sphincter injury
  - Aging
  - Neuropathy

Anal incontinence impact

- Affects 18 million
- Economic impact data lacking
  - Underreported
- 2nd leading cause of nursing home referrals
- Socially isolating
- Psychologically disabling
- Embarrassing
Clinical investigation of PFDs

- Detailed H+P
  - Voiding diary
  - Focused neuro exam
  - POP-Q
- Ancillary testing
  - Urodynamics
  - Imaging
    - Dynamic MRI, defecating proctogram, video UDS, endoanal US
    - Anal manometry

Central to diagnosis and treatment of PFDs is amount of *bother and impact on QOL* women experience from their pelvic floor problems.

How is bother and impact on QOL measured?

- Validated questionnaires
  - Convert “subjective” info into objective measures of presence and severity of symptoms and their effect on QOL
  - Exist for range of PFDs and sexual function
  - Condition-specific vs generic
  - Are evaluated for validity, reliability, responsiveness, and ability to measure changes in a clinical condition

There has been a shift away from anatomical to patient-centered and symptoms based outcomes.
Outcomes of therapy

• “Success” no longer defined by only objective measures
  – For patient, most important is relief of symptoms and improvement in QOL, not "anatomic success"¹
  – Depends on GOALS
  – Needs to include SUBJECTIVE parameters

¹Barber MD. Obstet Gynecol, 2009

Conclusions

• PDFs are common and costly
• PFDs have adverse effects on physical, social and emotional well-being
• Assessment of PFDs should include use of validated questionnaires to assess level of bother and effect on QOL
• Definitions of treatment success should include both anatomical and subjective outcomes

PFD Quiz

As a woman, your chance of getting a PFD is:
A. 1 in 3
B. 1 in 4
C. 1 in 5

The number of adults with bowel incontinence is:
A. 5 million
B. 12 million
C. 18 million

Bladder control problems only occur in postmenopausal women:
A. True
B. False

Risks for POP include:
A. Age
B. Giving birth
C. Smoking and chronic lung disease
D. Lifestyle factors
E. All of above