The Mysteries of the Female Pelvic Floor

Mr Paul Fiadjo FRCOG
Consultant Urogynaecologist
Mid-Essex Hospitals NHS Trust
Chelmsford
Disclosures

- Speaker fee and Conference sponsorship - Pfizer, Astella, Pharma
- Research Grant and Conference sponsorship - AMS
How do they do it?
Reality check
Pelvic Floor bridge
Pelvic Floor Dysfunction

Risk Factors – Women

- Pregnancy
- Delivery parameters
- Mode of delivery
- Age of first delivery
- Body weight/BMI
- Collagen
- Ethnicity
- Menopause
- Previous pelvic surgery/irradiation

BMI = body mass index

- North American population
- Cumulative risk of anti-incontinence and/or prolapse surgery by age 80 years: 11.1%
- 29% of these operations were for recurrent problems
<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Number of Women (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>2050</td>
<td></td>
</tr>
</tbody>
</table>

**Abbreviations:**
- FI = faecal incontinence
- PFD = pelvic floor disorder
- POP = pelvic organ prolapse
- UI = urinary incontinence

Prevalence of Urinary Incontinence: Influence of Age and Parity

Study Conducted Between 1995 and 1997 in 27,900 Women Aged ≥20 Years, from Norway

Pelvic Organ Prolapse

- How does it present
- Bladder function
- Bowel function
- Sexually active/Vaginal flatus
- QoL
- Previous Surgery esp. Pelvic
Types of Prolapse

- Apical (Uterine or Vault)
- Anterior (Cystocele)
- Posterior (Rectocele/ Enterocoele)
- Introital/ Perineal
Normal Pelvic Floor
Anterior wall prolapse
Posterior Vaginal Prolapse
Massive enterocoele
Perineal hypermobility
Staging

- Simple
- Baden-Walker
- POPQ
- POPQ stage
Life style modification

- Important to reduce pressure on pelvic floor
- Weight loss
- Pelvic mass
- Avoid chronic straining:
  - Constipation
  - Chronic bronchitis
  - Heavy lifting
- Pelvic floor exercises
## Pessaries

<table>
<thead>
<tr>
<th>Pessary Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring Pessary</td>
<td>A circular device for maintaining</td>
</tr>
<tr>
<td></td>
<td>the position of an implant or</td>
</tr>
<tr>
<td></td>
<td>other object in the vagina.</td>
</tr>
<tr>
<td>Shelf/Gellhorn Pessary</td>
<td>A plate-like device with a stem</td>
</tr>
<tr>
<td></td>
<td>for supporting an implant in the</td>
</tr>
<tr>
<td></td>
<td>vagina.</td>
</tr>
</tbody>
</table>

![Ring Pessary](image1.png)

![Shelf/Gellhorn Pessary](image2.png)
Pessary management

- Works best for anterior and apical prolapse
- Should be changed every 3-6 months
- Use with topical oestrogen
- Shelf pessaries preclude sexual intercourse
Surgical treatment

- Colporrhaphy
- Perineoplasty
- Hysterectomy
- Uterine preservation surgery
- Vault suspension
- Obliterative procedures
Traditional Anterior Repair
Urinary Incontinence

- MESA (USA) study 1986:
  - occurs in 37.7% of those >60 yrs who live in community
- Chiarelli (Australia) 1999:
  - 13% of 18-23 y.o. females
  - 35% of 70-75 y.o. females
- EPICONT (Norway) study 2000:
  - Gradual increase in prevalence until age 50 when it plateaus around 30% then rises again after age 70
- Brocklehurst 1993:
  - Up to 60% do not seek help despite being concerned
- Ouslander 1994, Armstrong 2000:
  - Major contributing factor in decision to seek residential care
- Fonda & Victorian Geriatric Peer Review Group 1990, Gardner 1992:
  - Up to 70% nursing home residents in Australia are incontinent
Patient assessment

History
- Main complaint (UI, SI, urgency, freq, nocturia, voiding disorder etc)
- Severity
- Previous conservative measures
- Previous continence surgery

Examination
- Prolapse, urethral mobility
- Palpable bladder
- Pelvic mass
- Pelvic floor strength
- Neurological exam
- Stress test
Overactive bladder syndrome

- Symptoms
  - Frequency
  - Nocturia
  - Urgency
  - Urge incontinence

- 2nd commonest cause of incontinence in women
Red flags: NICE criteria for referral to secondary care

**Urgent referral**
- Microscopic haematuria in women aged 50 years and older
- Visible haematuria
- Recurrent or persisting UTI associated with haematuria in women aged 40 years and older
- Suspected malignant mass arising from the urinary tract

**Indications for referral**
- Symptomatic prolapse that is visible at or below the vaginal introitus
- Palpable bladder on bimanual or abdominal examination after voiding

The prevalence of OAB is higher than many common conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OAB</td>
<td>11.8%¹</td>
</tr>
<tr>
<td>Depression</td>
<td>8.6%²</td>
</tr>
<tr>
<td>Asthma</td>
<td>8.6%³</td>
</tr>
<tr>
<td>Diabetes</td>
<td>5.5%⁴</td>
</tr>
<tr>
<td>Dementia</td>
<td>1.1%⁵</td>
</tr>
</tbody>
</table>


These data are from separate publications and are not all specific to the UK.
OAB can impact many areas of a patient’s life

**PHYSICAL**
- Limitations or cessation of physical activities
- Reduction of fluid intake

**SEXUAL**
- Avoidance of sexual contact and intimacy

**SOCIAL**
- Reduction in social interaction
- Limiting and planning travel around toilet accessibility

**OCCUPATIONAL**
- Absence from work
- Decreased productivity

**DOMESTIC**
- Need for special underwear or bedding
- Special precautions with clothing

**PSYCHOLOGICAL**
- Guilt/depression
- Loss of self-esteem
- Fear of being a burden
- Fear of lack of control
- Fear of urine odour
- Anxiety
- Sleep disturbance

---

Spectrum of treatments in OAB

Lifestyle advice

- Bladder drill
- Pelvic floor physiotherapy

Pharmacotherapy

- Botulinum toxin

Neuromodulation

- Reconstructive surgery

Conservative Rx

- **General measure**
  - Sensible fluid intake
  - Weight loss
  - Stop smoking
  - Caffeine use
  - Mobility aids or downstairs toilets
  - Pads & bedpans
  - Adjusting medication
  - HRT
  - Manage chronic cough

- **Initiate conservative treatment based on symptoms**
  - Pelvic floor exercises for stress leakage
  - Bladder retraining or medication for overactive symptoms
Anticholinergics

- **Efficacy 50-60%**
- **Side effects**
  - Dry mouth
  - Blurred vision
  - Constipation
  - Drowsiness
  - Tachycardia
- **Poor compliance**
Reasons for discontinuation primarily related to treatment expectations or tolerability of medication prescribed for overactive bladder

- Healthcare providers may be able to enhance compliance by discussing realistic expectations about treatment efficacy and side effects

Phase 1: n=260 000 USA households to identify patients using antimuscarinic agents for OAB; Phase-2 follow-up survey n=6577 respondents with antimuscarinic prescriptions for OAB. Patients who reported discontinuing one or more OAB medication during the 12 months before phase 2 were grouped by reason, using latent class analysis (LCA);

Mirabegron is a novel treatment for OAB that works differently to antimuscarinics. It works by inhibiting involuntary contractions in the bladder, leading to increased storage capacity and decreased voiding frequency. This is achieved through a combination of parasympathetic (cholinergic) and sympathetic (adrenergic) mechanisms. Anti-muscarinics block parasympathetic receptors, while betmiga, a β3-adrenoceptor agonist, acts on the sympathetic system.
Surgery for Urge Incontinence

- Mainly for refractory cases only
- Intravesical Botox injection
- Sacral Nerve Stimulation
- Clam cystoplasty
- Urinary bypass
Stress Urinary Incontinence

- Commonest form of UI
- Associated with cough, sneezing, exercise, laughing etc
- Assess pad usage
Surgery for SUI

- After failure of conservative Mx
- Transurethral Bulking
- Colposuspension
- Native Tissue fascial sling
- ?Synthetic mesh slings
Other SUI devices

- Continence Pessaries
- Tampoon
Practise Your Pelvic Floor Exercises!!