International Federation of Gynecology and Obstetrics
COMMITTEE FOR UROGYNAECOLOGY AND PELVIC FLOOR

MEMBER:
TSUNG-HSIEN (CHARLES) SU, CHAIR (TAIWAN)
DAVID RICHMOND, CO-CHAIR (UK)
CHITTARANJAN PURANDARE, EX OFFICIO (INDIA)
OSCAR CONTERAS ORTIS (ARGENTINA)
BOBFREEMAN (IUGA, UK)
PETER DE JONG (SOUTH AFRICA)
PAUL RISS (AUSTRIA)
STEVEN SWIFT (USA)
SURGICAL TREATMENT FOR FEMALE URODYNAMIC STRESS INCONTINENCE
Urinary Incontinence

• ICS definition: urinary incontinence (UI) as the complaint of any involuntary leakage of urine.

• Significantly impacts on Quality of life, both physically and psychosocially.

• By effectively identifying and treating incontinence -> improve quality of life.
Continence mechanisms in women

• Storage phase:
  – **Relaxed Bladder**: relatively constant low pressure absence of involuntary detrusor contraction
  – **Closed outlet**

• Continence is maintained:
  urethral pressure > intravesical pressure
Pathophysiology of urinary incontinence

• Urinary incontinence:
  dysfunction in either storage or emptying function

• Urethral sphincter dysfunction

• Bladder dysfunction
Urodynamic stress incontinence (USI)

• The complaint of involuntary leakage on effort or exertion, or on sneezing or coughing

• Vesical pressure > urethral pressure during sudden increasing intra-abdominal pressure without involuntary detrusor contraction

• Weakness of the pelvic floor or sphincter
Pathophysiology of female USI

• **BN hypermobility:**
  Loss of BN support
  Treatment target: restoration of support

• **Intrinsic sphincter deficiency (ISD):**
  Sphincter dysfunction

• Both disorders in varying degrees.
Surgical treatment for USI

• Abrams et al. 2005:

  ➢ Simple classification for operative procedures for USI
  ➢ 1. Urethra/bladder neck stabilizing procedures
effective for type 1- and to lesser degree
for type 2-incontinence

  ➢ 2. Urethral sphincter augmentation
most beneficial for ISD, type 3 incontinence
Gold standard procedures for USI

- Retropubic bladder neck suspension (Burch)
- Slings
- Long-term success rate > 80\%
Burch colposuspension

- John Burch 1961

- Bladder neck and proximal urethra supported by suspension of paravaginal tissues towards ipsilateral ileopectineal (Cooper’s) ligaments on pelvic sidewalls.
Outcomes of Burch’s colposuspension

• Jarvis 1994:
  
  Obj conti rate: 84.3% (primary)
  
  82.5% (previous anti-inconti surgery)

• Long term follow-up:  (Bergman,1995; Alcalay,1995)
  
  Cure rates: 82% (5 yrs f/u)
  69% (12 yrs f/u)
Slings

- Pubovaginal sling

- Mid-urethral sling:
  - Retropubic sling (TVT/Sparc)
  - Transobturator sling (TVT-O, Monarc, Obtryx)
  - Single incision (MiniArc, Adjust, Solyx)
Tension-free vaginal tape (TVT)

- Ulmsten, 1995
- A woven prolene (polypropylene) tape
- Inserted at level of midurethra.
- Traverse Retzius space towards ant abd wall
- Tape left in situ without fixation -> tension-free manner.
Outcomes

• Ward and Hilton, 2004:
  ➢ Randomized trial of TVT vs. Burch
  ➢ 24 months f/u
  ➢ Objective cure rate: TVT: 81% vs. Burch: 80%

• Nilsson, 2008:
  After 11.5 years
  Objective cure: 90%
  (both negative stress and pad test)
The trend of anti-incontinence surgery

- Less invasiveness
- Less technical demand
- Long term efficacy
- Safety
- Improvement of QoL
Transobturator tape (TOT)

- Delorme, 2001:
  Monarc: “outside-in” procedure

- de Leval, 2003:
  TVT-O: “inside-out” procedure
Transobturator sling (TVT-O, Monarc)
Transobturator slings

- Entirely perineal technique
- Risk of bladder injury: reduced to estimated 0.5%
- Avoid penetration of retropubic space
- Reduction of surgery-related complications
- Promising outcome after mid-term follow-up
Single incision sling

- Self-anchoring mini-tapes
- Minimize operative procedure
- Reduce thigh pain and risk for bladder injury by minimizing tape’s trajectory.
- Shorter polypropylene mesh
- No exit skin cuts are needed.
- Wait for mid-term outcome.