Ob/Gyn Conference Series: Urinary and Fecal Incontinence After Vaginal Childbirth

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Speaker Disclosure

• Johnson & Johnson - Shareholder
All conflicts of interest of any individuals who control the content of this CME activity, including faculty and members of the Continuing Medical Education Committee and the Continuing Medical Education Department, have been identified and resolved.

Learning Objectives

Upon completion of this conference, participants should be better able to:
• Explain evidence-based use of episiotomies.
• Screen all patients for urinary and fecal incontinence after vaginal delivery.
• Evaluate evidence-based data supporting treatment interventions for incontinence.
• Develop initial diagnosis and treatment strategies for incontinence and properly assess results to escalate interventions when necessary.
Pelvic floor disorders after childbirth

- Urinary stress incontinence
- Urge urinary incontinence
- Pelvic organ prolapse
- Fecal incontinence
- Urogenital fistula
- Rectovaginal fistula

In immediate effects are distressing
Effect on pelvic floor may not be immediately evident
Mode of delivery plays an important role
Events at delivery
Simple targeted interventions are effective

Relevant structures

- Pubococcygeus muscle
- Urethral sphincter
- Urethral support
- Internal anal sphincter
- External anal sphincter
Mobility of the perineal body and anorectal junction before and after childbirth

- Sonographic measurement of the levator hiatus
- Mobility of perineal body and anorectal junction highest in vaginal deliveries
- Levator hiatus measurements correlate with mobility
- Episiotomy or perineal lacerations did not seem to contribute significantly

Chantarason V et al, 2012

Pelvic floor muscle function before and after childbirth

- PFM strength and endurance significantly reduced after one child
- Reduction in strength was the highest in instrumental delivery (>31.4hPa), vaginal delivery (20.1hPa) > acute C/S (5.2hPa)

Sigurdardóttir T et al, 2011

Effect of mode of delivery

- PFD are more prevalent after one delivery
- C/S reduces the prevalence of USI at one year
- Vaginal deliveries may increase the prevalence of PFD
Events at delivery

- Episiotomy
- Perineal lacerations
- Forceps
- Vacuum
- Positioning
- Epidural

The Effects of Mediolateral Episiotomy on Pelvic Floor Function After Vaginal Delivery

- 254/265 MLE/no episiotomy
- MLE does not protect against urinary and anal incontinence and vaginal prolapse and is associated with a significantly lower pelvic floor muscle strength than spontaneous perineal lacerations and with more dyspareunia and perineal pain.

Sartore A et al, 2004

Pelvic floor disorders after vaginal birth

- 449 participants @ 5-10 yrs
- USI - 16%
- OAB - 10%
- AI - 12%
- POPBH - 14%
- Episiotomy, perineal laceration and operative birth

Handa VL et al, 2012
Pelvic floor disorders after vaginal birth

- Episiotomy was not associated to PFD
- Two of more spontaneous perineal laceration doubled the risk of prolapse
- Operative deliveries tripled the risk of OAB and prolapse

Alternative model of birth to reduce the risk of assisted vaginal delivery and perineal trauma

- Alternative model of birth (AMB) vs Traditional model of birth (TMB)
- Primary Outcome – AVD (episiotomy) and PT (lacerations)
- AVD: AMB (19.8%) vs TMD (42.1%) p<.001
- Intact perineum: AMB (40.3%) vs TMD (12.2%) p<.001
- Episiotomy: AMB (21%) vs TMB (51.4%) p<.001

Walker C et al, 2012

Pelvic floor disorders 5-10 years after vaginal or cesarean childbirth

- No difference in the odds of PFD in any of the C/S groups
- Operative vaginal deliveries increased the odds of all PFD 2-7 times
- Vaginal birth increased the risk of USI an POP
- 7 C/S required to prevent one case of PFD

Handa VL et al, 2011
Parity, Mode of Delivery, and Pelvic Floor Disorders

- UUI 1.5 times more common in the vaginally parous group than in the cesarean group.
- Vaginal delivery increased the odds of any pelvic floor disorder compared with cesarean delivery by 85%.
- Cesarean delivery at any stage of labor reduces urinary incontinence.
- No difference in prolapse rates when comparing labored cesarean and vaginal delivery.
- 7 C/S to prevent one case of PFD

Lucacz ES et al, 2006

Immediate Postpartum Perineal Examination as a Predictor of Puerperal Pelvic Floor Dysfunction

- No relation between perineal inspection and the results of pelvic floor strength assessment (digital test, vaginal manometry, and urine stream interruption test).
- USI, UUI, UPU, Anal incontinence in superficial lac., 3rd degree and fourth degree. The only significant outcome was AI in the 4th degree group
- Conclusion: Immediate postpartum perineal examination is not a good predictor of pelvic floor weakness, stress urinary incontinence and, in general, lower urinary tract disorders.

Pregazzi R et al, 2002

Validated instruments

- Sandvik’s severity index
- Pelvic floor distress inventory PFDI 20
- Pelvic floor impact questionnaire PFIQ 7
- Fecal incontinence severity index FISI
PFDI 20
- Measures perceived severity
- POPDI-6
- CRADI-8
- UDI-6
- 100 points each subcategory

PFIQ 7
- Measures impact on daily life
- UIQ 7
- CRAIQ 7
- POPIQ 7
- 100 each subcategory

FISI
- Severity of fecal incontinence
- Gas, mucus, solids and liquid multiplied by 4 events of severity
- Maximum score- 20 points
Effect of pelvic floor muscle exercises in obstetrical events

- 18,865 primiparous women in the Norwegian Mother and Child Cohort Study
- Frequency of pelvic floor muscle exercises (0, 1-2 per wk, 3 or more per week)
- No increased odd of episiotomy, first-second degree perineal laceration, third-fourth degree perineal laceration, vacuum extraction, forceps delivery or cesarean delivery

Bø K et al, 2009

The Influence of Pelvic Muscle Activation During Vaginal Delivery

- "Pelvic floor muscle training does not necessarily mean increased muscle activation during childbirth. Instead, pelvic floor muscle training may improve muscle control and flexibility".

Parente MP et al, 2010

PFMT for Prevention and Treatment of Urinary and Fecal Incontinence in Antenatal and Postnatal Women

- Cochrane review 2009
- 15 studies, 6181 women
- Women randomized to PFMT report 30% less postpartum urinary incontinence; RR 0.71, 95% CI 0.52 to 0.97.
- Postpartum urinary incontinence three months after delivery with PFMT were less likely (20% less; RR 0.79, 95% CI 0.70 to 0.90) to report urinary incontinence 12 months after delivery.
- Women receiving PFMT were about half as likely to report faecal incontinence (RR 0.52, 95% CI 0.31 to 0.87) at 12 months.
Pelvic Floor Education After Vaginal Delivery

- Questionnaire, clinical examination, perineosonography, urethral pressure profiles, and intravaginal and intra-anal pressure recordings during pelvic floor contraction.
- Significant reduction on USI not on fecal incontinence or pelvic floor weakness.

Meyer S et al, 2001

OBSTETRICAL FISTULA

Obstetrical Fistula
- Chronic fourth degree laceration
- Urogenital fistula
- Rectovaginal fistula
- Anocutaneous fistula
Urogenital fistula
- Vesicovaginal
- Ureterovaginal
- Uterovesical
- Urethrovaginal

Urogenital fistula testing
- Pyridium
- Indigo carmine
- Tampon test - 10 min
- VCUG
- MRI

Rectovaginal fistula
- 85% obstetrical
- Complex vs simple
- 2.5 cm
- Infection
- Fecal incontinence
Management of rectovaginal fistula

- Immediate v delayed repair
- Low residue diet
- Broad spectrum antibiotics 10-14 days
- Loperamide
- Drainage of abscesses
- Bulking agents

Treatment of rectovaginal fistula

- Spontaneous closure
- Fecal incontinence to be treated at time of repair, especially if chronic fourth degree laceration
- Layered closure

Clinical Pearls

- Forceps delivery consistently demonstrates to increase the risk of PFD.
- Episiotomy does not increase the risk of PFD
- 7 C/S to prevent one case of PFD
Clinical Pearls

- Objective assessment of symptoms through QOL.
- Fistula surgery may be accomplished before 6 mo.
- Evaluation of fistula is feasible and accurate.