Trauma Induced Pelvic Floor Disorders: Implications for Physical Therapists

IOPTWH Subgroup Seminar

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WCPT 2015 Singapore

Objectives

- To discuss the implications of trauma induced pelvic floor disorders related to obstetric fistula to PT practice and female genital mutilation (FGM)
- To develop a greater awareness of the consequences of pelvic floor trauma
- To discuss current best practice for the management of women with dysfunctions related to FGM and obstetric fistula

Definitions

- Obstetric fistula is an abnormal opening between a woman’s vagina & bladder and/or rectum through which her urine and/or faeces continually leaks
  WHO (2006)

- FGM are procedures involving the partial or total removal of the external female genitalia for non-therapeutic reasons.
  Abdulcadir (2014)

Who is Affected

- Obstetric fistula: estimated that 3.5 million girls and women suffer
  - 50,000 to 130,000 new cases develop a year
  - Nearly non-existent in Western cultures
  Wall 2006, Waaldijk 1996

- FGM: 130 million girls and women have undergone
  - 3 million girls are at risk every year
  - Prevalence is still more than 80% in some African and Middle Eastern Countries
  UNICEF 2013

Obstetric Fistula Map

- http://www.girls.org

Trauma Induced Pelvic Floor Disorders: Background

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Women’s health & pelvic floor physical therapist
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WCPT 2015 Singapore
What Systems are Affected with Obstetric Fistulas?

- Urologic
- Gynecologic
- Gastrointestinal
- Musculoskeletal
- Neurologic
- Vascular

Urological Injury
- Complex combined fistulas
- Urethral damage, including complete urethral destruction
- Bladder stones
- Stress urinary incontinence
- Marked loss of bladder tissue from extensive pressure
- Necrosis
- Secondary hydroureteronephrosis
- Chronic pyelonephritis
- Renal failure

Gynecological injury
- Amenorrhea
- Vaginal stenosis
- Cervical injury, including complete cervical destruction
- Secondary pelvic inflammatory disease
- Secondary infertility

Gastrointestinal Injury
- Recto-vaginal fistula formation
- Rectal stenosis or complete rectal atresia
- Anal sphincter incompetence
- Fecal Incontinence

Musculoskeletal injury
- Pubis Symphysis Injury
- Contractures/foot drop
- Weakness of musculature along lumbo sacral plexus (L5-S2)
  - Hip abductors/Extensors
  - Anterior Tibialis
  - Intrinsic foot flexors
Neurological Injury
- Foot-drop from lumbosacral or common peroneal nerve injury
- Complex neuropathic bladder dysfunction

Vascular Injury
- Necrosis of pelvic tissues
- Intolerance to dependency of their limbs.

What Systems are Affected with FGM?
- Urologic
- Gynecologic
- Musculoskeletal
- Neurologic
- Vascular

Day of Zero Tolerance for FGM
- UN Secretary General Ban Ki-Moon
  - 86 million additional girls worldwide subjected by 2030
- No religious or health reasons
- Tradition quoted as reason for persistence
- Collective change and public declarations most effective in abandonment in parts of Africa

Relationship of FGM/Obstetric Fistulae
- Widespread belief that FGM predisposes women to the development of obstetric fistulae
- Both trauma to the pelvic floor
- Both contribute to suboptimal quality of life and physical disorders
- Both can require skilled rehabilitation intervention which falls within scope of women’s health PT

Impact: Obstetric Fistula and Female Genital Mutilation
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Disclosure
- Board Member of the World Wide Fistula Fund
- Worldwide Fistula Fund (WFF) promotes and supports programs aimed at prevention of obstetric fistulas, providing comprehensive care and expert surgical services for women suffering from obstetric fistulas, and programs focused on helping women reintegrate into their communities following treatment.
Obstetric Fistula Pathway

- Low socio-economic status of women/ Limited social roles
- Early marriage/malnutrition: child birth before pelvic growth is complete
- Lack of access to obstetric services

Psycho-Social Impact of Fistula

- Fetal fatality 95%
- Social isolation/Stigmatization
- Divorce/Abandonment
- Victim blaming (punishment from God due to sexual misbehavior)
- Malnutrition
- Depression/Anxiety
  - suicide

The Voice of Women with Fistula

- “My partner thinks that the problem is from my parents’ home. He thinks that my ancestors cursed me.” (Woman from Soroti, age 25)
- “Probably I got fistula when the TBA was pulling out the child. I felt her fingers prick inside of my vagina.” (Woman from Soroti, age 29)

Female Genital Mutilation

- No health benefits for girls and women
- Procedures can cause severe bleeding, problems urinating, cyst formation, infections, infertility as well as complications in childbirth and increased risk of newborn deaths

FGM: Cultural Causes

- The social pressure to conform to what others do and have been doing is a strong motivation to perpetuate the practice
- Often considered a necessary part of raising a girl properly
- FGM is often motivated by beliefs about what is considered proper sexual behavior

https://www.who.int/mediacentre/factsheets/fs241/en/

http://www.who.int/mediacentre/factsheets/fs241/en/
FGM: Cultural Causes

- Though no religious scripts prescribe the practice, practitioners often believe the practice has religious support.
- Religious leaders take varying positions with regard to FGM: some promote it, some consider it irrelevant to religion, and others contribute to its elimination.

- Local structures of power and authority, such as community leaders, religious leaders, circumcisers, and even some medical personnel can contribute to upholding the practice.
- In most societies, FGM is considered a cultural tradition, which is often used as an argument for its continuation.

FGM: Emotional Impact

- Lower self-esteem
- Anxiety
- Personality disorders
- Symptoms of depression

2010 Study

FGM: Biological Impact

- Painful menstruation and bleeding throughout the month causing absence from school and poor performance.
- Subsequently: they earn less and have less control over choices of marriage and child planning.

Relationship between FGM and obstetric complications.

- FGM is a precursor to early marriage, it is linked to instances of child marriage and early first pregnancy before a girl’s body is skeletally mature.
(Accessed Jan 1, 2015)
FGM and obstetric complications.
- 2006 WHO research
- 28,393 women at 28 obstetric centers across 6 countries – Burkina Faso, Ghana, Kenya, Nigeria, Senegal and Sudan
- Women with Type III FGC (infibulation) were 30% more likely to require a caesarean section
- 70% more likely to experience post-partum hemorrhage

FGM Individuals Treated for a Fistula
- Increased length of labor
- Increased use of catheter during the surgery
- Increased use of a muscle sling procedure to correct the fistula

FGM: the voice of the women
- “I escaped FGM because I was badly ill at the time it was done”
- “There is no problem with female circumcision”
- “The practice is not as bad as the Europeans pretend”
- “To say that female circumcision has dangerous consequences means not to believe in God”

Resources
- Campaign to End Fistula (UNFPA) – http://www.endfistula.org/
- Engender Health – http://www.engenderhealth.org
- World Wide Fistula Fund – http://worldwidefistulafund.org/

Obstetric Fistula: the Role of Physiotherapy
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Women’s health & pelvic floor physiotherapist, United Kingdom

WCPT 2015 Singapore
Overview

- Fistula in Ethiopia
- Hamlin Fistula Ethiopia
- Case study

Ethiopian Statistics

- 4.1 children per woman (2:1 rural:urban)
- 59% no antenatal care
- 16% deliver at health facility, assisted by skilled provider
- 13% receive postnatal care within first 2 days of delivery
  Ethiopia Mini Demographic & Health Survey (2014)
- 9,000 new case of obstetric fistula per year
  Hancock (2009)

Obstetric Fistula in Ethiopia

- lack of maternity services & poor access
- little women and hard work
- age at delivery?
- female genital mutilation?

Hamlin Fistula Hospital and outreach centres

Obstetric Fistula

- prolonged, obstructed labour ➔ vascular ± neurological damage
- vesicovaginal, rectovaginal

Obstetric Fistula - Symptoms

- constant urinary ± faecal incontinence
  - hygiene
  - physical
  - social
- pain
- foot drop
- contractures
- general weakness
**Fistula Patients and Repair**

- Hamlin Fistula Hospital & outreach centres – 1,782 repairs (2013-14) 
  Hamlin Ethiopia Annual Report **
- successful repair – up to 95% 
  Hancock (2009)
- persistent urinary incontinence after successful repair – 20-55% 
  Hancock (2009)  
  Murray et al. (2002)

**Risk Factors for Persistent Incontinence**

- size of fistula (circumferential) 
- position of fistula (urethra) 
- small bladder capacity 
- vaginal scarring 
- requires >1 repair 
- recto-vaginal fistula 
- age 
- lower parity 

Goh et al. (2008); Nardos et al. (2009)

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**Case Study**

- 22 years old 
- obstructed labour → vesicovaginal fistula aged 20 
- bed rest for 3 months 
- walk & bus to hospital with health officer 
- physiotherapy assessment 
  - right foot drop 
  - weak pelvic floor muscles (PFM) 
- pre-op rehabilitation & PFM exercises

**Case Study – Post-op**

- persistent urinary incontinence & incomplete bladder emptying 
- physiotherapy 
  - PFM assessment and advice 
  - voiding advice – double voiding 
  - continued goal-orientated rehab for foot drop 
- discharge home – review at 6 months

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**Case Study Review**

- persistent leakage at 6 months 
- emptying bladder adequately 
- minimal foot drop 
Possible management:
  - urodynamics & anticholinergic medication 
  - further PFM assessment / treatment 
  - urethral plugs 
  - further surgery 
  - Brook & Tessema (2013)

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**Female Genital Mutilation: Role of Physiotherapy**

Ruth Broom PT 
Retiring Chair IOPTWH Practice Committee New Zealand

WCPT 2015  Singapore
Emergence of Worrying Trends

- Lowering of average age of FGM
- Medicalization of the procedure based on belief of safety


Research Gaps

- In prevention of FGM – progress limited
- In evidence-based care to optimize health outcomes
- In prevention of medicalization

Abducaidir et al 2014

Traditional Practices

- Other inhumane practices have ended
- Success of Convention model in ending foot binding
- Successful in parts of Africa

Mackie 1996

Use of biofeedback and pelvic floor exercises in recent publications
- Reported use of biofeedback re-educative therapy in case of overactive bladder after female genital mutilation/cutting (FGM/C) type III

Abducaidir & Dallenbach 2013

What is FGM?

- FGM is defined as procedures involving partial or total removal of external female genitalia or other injury to the female genital organs for non-medical reasons

WHO Classification

- Type I: partial removal of the clitoris and/or prepuce (clitoridectomy)
- Type II: Partial or total removal of the clitoris and the labia minora with or without excision of the labia majora (excision)
WHO Classification

- Type III: narrowing of the vaginal orifice with the creation of a covering seal by cutting and apposition of the labia minora and/or the labia majora, with or without excision of the clitoris (infibulation)
- Type IV: unclassified – all other harmful procedures to female genitalia for non medical purposes

The WHO/UNICEF/UNFPA Joint Statement classified female genital mutilation into four types. WHO 2008

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Extent of cutting increases from Type I to Type III
- Exceptions: some forms of Type II clitoris not cut
- Type I – removal of clitoris may reduce sexual sensitivity more than Type III if clitoris left intact under infibulation

Nour et al 2006

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Scope of Practice

- Long-term risks within the scope of practice of Women’s Health
- Immigration, political unrest & wars scatter women with FGM worldwide to reside in our own communities
- 2011 – estimate of 74,000 women in UK affected with 7,000 girls at risk of FGM

Raof et al 2011, Abdulcadir & Dallenbach 2013

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IOPTWH History

- Position against the practice of FGM taken in 2007
- Endorsed unanimously by WCPT general meeting in Vancouver 2007
- Communicated to WHO 2008 in person

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2010 IOPTWH Survey of Member Countries

- 13% of 423 total respondents treated women with FGM
- Urinary incontinence, perineal trauma/tears in childbirth, dyspareunia, post-partum urinary problems and chronic pain most frequent treatments
- United Kingdom – most women treated
- Synopsis of survey to WHO

Broom et al 2011
2010 IOPTWH Member Country Survey
- 20% of 107 respondents treating FGM
- Most referrals from Specialist Obstetricians & Gynecologists
- Urinary dysfunction, postnatal perineal trauma, dyspareunia, chronic pain, postnatal urinary dysfunction concurring with 2010 survey

2015 UK Survey
- From whom have you received referrals for treatment of women or girls who have undergone female genital mutilation?

Which physiotherapy techniques did you use in treating women or girls with female genital mutilation? Check all that apply

How many episodes of care/treatment have you provided for women or girls with the effects of female genital mutilation? e.g. treatment for dyspareunia and postnatal perineal trauma
Case Study

- 3 episodes of physical therapy care for woman from Horn of Africa
- Infibulated as young girl
- Displaced by war
- Unknown age - lack of birth registration
- Coptic Christian

Episode 1

- Referral by Gynaecologist for symptoms of ‘dyspareunia/apareunia with secondary vaginismus’
- Patient goal – to achieve comfortable penetrative sexual intercourse post defibulation

Episode 1 Treatment

- Biofeedback
- Total body relaxation
- Progressive vaginal dilators
- Goal of comfortable penetrative sexual intercourse and pregnancy achieved
- 12 sessions

Episode 2 - following vaginal delivery & anal sphincter tear

- 3.7kg infant (8.15 lbs) – post dates
- Tear assessed as 3b – friable tissue noted on suturing
- Symptoms of faecal loss & difficulty controlling flatus
- PT inpatient & f/u outpatient care
- Outcome – by 3 months no bowel urgency or faecal loss & able to detect and control flatus
Episode 3
- 6 months post delivery
- Symptom - perineal pain
- Fenton’s procedure
- Myofascial release
- Concurrent clinical psychology
- 6 sessions – gained relief

Research
- Swedish study – significant increased risk of anal sphincter tears at delivery, especially for vaginal instrumental deliveries
  Berggren et al 2013
- Women with FGM like childbirth to be natural without intervention
  Raouf et al 2011

Call for Research
- Call for further studies which could evaluate long-term postpartum complications e.g. prevalence of postpartum urinary incontinence or effectiveness of treatments using biofeedback or ‘Kegel’ exercises
  Abdulcadir et al 2014

Vesicovaginal Fistula in Nigeria: Involvement of Physiotherapy in the Prevention and Management
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Overview
- World Prevalence
- Nigeria Statistics
- Risk Factors
- The Issue at Hand
- Impact on Victims
- Management of VVF patients in Nigeria
- Physiotherapy in VVF Management in Nigeria – the obstacles

World Prevalence
- High prevalence in the world
- Estimated 2 million women living with problem
  Ijaiya, 2015
Nigerian Statistics
- Between 400,000 and 800,000 women currently living with VVF in Nigeria.
- Highest prevalence in the world.
- An estimated 20,000 new cases occur annually. Ijaiya, 2015.
- 90% of cases untreated. Gbeneol, 2013.
- Over 85% of cases in Nigeria are in the north. Yola, 2015.

Risk Factors
- Early marriage.
- Illiteracy.
- Poverty.
- Lack of access to good antenatal care.

The Issue at Hand
- Issue is often not discussed to end the practice responsible for the primary cause of VVF in the area which is early marriage.
- Victims are mainly girls between ages of 11 and 15 who become mothers either through early marriage or unwanted pregnancies.
- A majority of the cases (90%) are from prolonged, unattended obstructed labour. Yola, 2015.

Issue at Hand
- Other causes include harmful traditional practices such as Female Genital Mutilation among others.
- Obstructed labour and delivery by unskilled birth attendants who simply cut through the vagina to create passage for the baby, that eventually results in VVF. National Foundation on VVF, 2003.

Impact on Victims
- VVF accounts for 75% of loss of baby and is responsible for 55 – 60% of divorce rates in the country. Yola, 2015.
- Victims are treated as outcasts in the society.
- Rejected by families and relations.
- Divorced/abandoned by spouses.
- Sometimes end up with begging or prostitution to survive. National Foundation on VVF, 2003.

Location of VVF centers in Nigeria
- Centers for VVF repairs are located in different parts of Nigeria.
Management of VVF patients in Nigeria

- Main treatment strategy - surgical repair
- Doctors and Nurses - trained regularly for surgical repairs
- No Physiotherapy unit in centre

Physiotherapy in VVF Management in Nigeria – the Obstacles

- No Physiotherapists in the employ of all centres except Abakaliki center with only one PT
- Patients are referred for physiotherapy few days to discharge
- Most do not receive any form of physiotherapy at all

VVF Surgery in Nigeria

Physiotherapy in VVF Management in Nigeria

- Those referred are only referred if they present with foot drop
- Most post repair patients end up with stress incontinence but are not always referred for physiotherapy

References


Ilaya M.A. Photo Contest 3rd place, IUGA Newsletter, 2015.


