Vesico-Vaginal Fistula: A Public Health Menace in Developing Countries

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Disclosures

• None
Learning Objectives

At the completion of the discussion attendees will have an understanding of the following topics:

• The factors that influence the development of Vesico-Vaginal Fistula (VVF)
• Barriers to medical and surgical care of the VVF patient
• United Nations Population Fund “Campaign to End Fistula”
Hawa
Large VVF
Vesico-Vaginal Fistula

An obstetric fistula is an abnormal communication or hole the develops between the bladder (vesico-vaginal) or rectum (recto-vaginal) and vagina as a result of a traumatic childbirth ...
Maternal Mortality – VVF

Fistula Programs
Causes of Maternal Death Worldwide

- Unsafe abortion: 13%
- Indirect causes: 20%
- Other direct causes: 8%
- Obstructed labor: 8%
- Pre-eclampsia: 12%
- Severe bleeding: 24%
- Inflection: 15%
“Every minute, a woman dies in pregnancy or childbirth, and for every woman who dies, 20-30 others will survive but with morbidity, one of which is obstetric fistula”

Source: G. Lewis, WHO Press.
Epidemiology

• Estimated 2+ million women and young girls suffer from VVF in Africa and Asia
• Annually 50-100,000 new VVF cases
• Approximately 3-5/1000 pregnancy
• Incidence in cultures with trained obstetric providers approaches 0
Factors Contributing to VVF

- Young age at first pregnancy
- Poverty
- Illiteracy
- Home delivery
- Lack of prenatal care
- Untrained birth attendants and limited access to emergency care

Source: Lancet 2006; 368: 1201-1209
The Demographics of a VVF Patient

- Small (44Kg)
- Short (<150 cm)
- Married Early (mean age = 15.5 years)
- Now Divorced 49%
- Separated 22%
- Uneducated 78%
- Poor/Rural (>95%)
- Developed fistula as primagavida 46%

- 824/899 fetal deaths
- 75/899 live births
  - 14 died in first month
- >50% of these women endured fistula for 1-9 years before seeking treatment.
- Avg. fistula 3.5 cm
- 92% repair success
- 71% fetuses were ♂

Source: Am J Obstet Gynecol 2004; 190: 1011-1019
Cephalopelvic Disproportion

- 18th Century obstetrical drawing of obstructed labor from absolute cephalopelvic disproportion.
- From William Smellie’s *Sett of Anatomical Tables, 1752.*

Source: The Lancet 2006; 368: 1201-1209
Obstructed Labor

Greater than 90% of VVF attributable to complications of prolonged labor or obstructed labor secondary to cephalopelvic disproportion
Complex VVF Urethral involvement
Obstetric Injury Complex

- Dehydration
- Malnutrition
- Urologic
- Gynecologic
- Musculoskeletal
- Dermatologic
- Social
The obstructed labor injury complex

- **Urological injury**
  - Vesicovaginal fistula
  - Urethrovaginal fistula
  - Ureterovaginal fistula
  - Uterovaginal fistula
  - Complex combined fistulas
  - Urethral damage, including complete urethral destruction
  - Bladder stones
  - Stress 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**
  - Rectovaginal fistula formation
  - Rectal stenosis or complete rectal atresia
  - Anal sphincter incompetence

- **Musculoskeletal injury**
  - Osteitis pubis

- **Neurological injury**
  - Foot-drop from lumbosacral or common peroneal nerve injury
  - Complex neuropathic bladder dysfunction

- **Dermatological injury**
  - Chronic excoration of the skin from maceration by urine or faeces

- **Fetal injury**
  - Fetal case-fatality rate of about 95%

- **Social injury**
  - Social isolation
  - Divorce
  - Worsening poverty
  - Malnutrition
  - Depression (sometimes with suicide)
  - Premature death

Source: The Lancet 2006; 368: 1201-1209
Barriers to Care

• Lack of education
• Lack of resources $$$
• Cultural and Religious values
• Limited number of trained obstetric birth attendants
• Limited number of trained VVF surgeons
Breaking the cycle

Obstructed Labour

EmOC – none, poor quality or too late

Timely, Quality Obstetric Care

Healthy Mother & Newborn

Pregnancy

Return to Community

Treatment

Fistula
Campaign to End Fistula

- A part of the United Nations Population Fund (UNFPA), goals include:
  - Universal access to reproductive health services by 2015
  - Universal primary education and closing the gender gap in education by 2015
  - Reducing maternal mortality by 75 per cent by 2015
  - Reducing infant mortality
  - Increasing life expectancy
  - Reducing HIV infection rates
  - Universal access to reproductive health services by 2015
  - Universal primary education and closing the gender gap in education by 2015
  - Reducing maternal mortality by 75 per cent by 2015
  - Reducing infant mortality
  - Increasing life expectancy
  - Reducing HIV infection rates

- Campaign launched in 2003, and performing detailed needs assessment.

Source: Campaign to End Fistula Printed Materials
Campaign to End Fistula

- Global initiative launched in 2003 by United Nations Population Fund (UNFPA)
- Greater than 20,000 patients treated in fistula hospitals
Maternal Mortality – VVF

Fistula Programs

UNFPA 2010
Prevention
Reducing Maternal Death & Disability

- Health systems approach
  - Human resources
- Continuum of care
  - Throughout pregnancy, delivery and postpartum
  - From community to facility
- Family planning
- Delaying first pregnancy
Reintegration

Adapted from DIRG/OFWG, 2006

- Continence
  - Return to fertility as desired
  - Return to sexual life as desired
  - Safe future delivery

- Reduced stigma
  - Participation in religious and social life
  - Social support
  - Marriage/re-marriage as desired

- Increased self esteem
  - Happiness

- Economic status regained or improved
  - Family support or source of income
  - Able to support others
Vocational Programs
VVF Patient Ambassadors

- Research
- Program design and evaluation
- Service delivery
- Community mobilization
- Policy advocacy
Quality Health Care
Facilities, Staff, and Resources
Outcomes of VVF Surgery

- Success rate after primary VVF surgery approximates 80-90%
- Twenty five percent of patient suffer with a lifetime of incontinence after fistula repair
- Endocrinopathy – 63%
- Nerve injuries (Foot drop) 20%
- X-ray abnormalities – 32% (pelvic fracture, bone reabsorption, and symphyseal separation)
Summary

• Vesico-Vaginal Fistula is a devastating disease complex that continues in the underserved parts of the globe.

• The surgical repair is complex; the real need is to avoid the occurrence of Vesico-Vaginal Fistula.

• Campaign to End Fistula
  – Availability and access to emergency obstetric treatment
  – Changes in traditional and cultural mores regarding family planning
  – Government initiatives