



## COMPREHENSIVE ABORTION CARE PART I - INTRODUCTION

YONAS GETACHEW, MD  
CLINICAL ADVISOR, CIRHT  
ASS'T PROFESSOR, OB-GYN, ADDIS ABABA UNIVERSITY

## Part I

### Introduction



## Objectives

- Define abortion
- Describe global, regional and national picture
- Identify etiologies of abortion
- Describe the different clinical categories of spontaneous abortion
- Evaluation of clients with abortion
- Describe induced abortion and post-abortion care (PAC)
- Describe Ethiopian Law



## Outline

- Definitions
- Overview
- Classifications
- Spontaneous abortion, etiology, clinical types
- Induced abortion and PAC
- Abortion laws



## Abortion

- Pregnancy (gestation) is the maternal condition of having a developing fetus in the body
- Every pregnancy has a risk
- Also referred to as “miscarriage, early fetal loss”
- Can happen spontaneously or intentionally



## Definitions

- Abortion is termination of pregnancy before viability
- Viability means is the gestational age (GA) at which the fetus is sufficiently developed to survive extra uterine life
- In most countries, the GA for viability is 20 weeks or birth weight of  $\geq 500\text{gm}$



## Definitions

- In USA, abortion sometimes defined as termination of pregnancy at GA of less than 20 weeks or a birth weight of less than 500gm
- Most Countries abortion is defined as termination of pregnancy before GA 28 weeks or birth weight of less than 1000gm



## Definitions

### WHO:

- Abortion is referred as termination of pregnancy before or at GA of 22 weeks or weight less than 500gm (WHO, 2003)
- Viability, no upper GA limits, which depends on various factors in each country (WHO, 2012)



## Definitions

### Ethiopia:

Abortion is the termination of pregnancy before fetal viability, which is to be less than 28 weeks from the last menstrual period (LMP). If the LMP is not known, a birth weight of less than 1000gm is considered abortion. (TPGL, page 5)



## Global

- 208 million pregnancies annually
- 123m (59%) planned, 85 (41%) unplanned
- 22m (49%) unsafe abortion
- 47,000 deaths related to abortion
- 5m disabilities associated with unsafe abortion



## Ethiopia

- 4 million pregnancies annually
- 500,000 induced abortions
- One of the common indications for all gynecological admissions
- 7% of maternal deaths (MOH report, 2014)
- One of the five major causes of maternal death



## Classifications

- WHO: "safe" or "unsafe"
- GA: first or second trimester
- Cause: spontaneous or induced
- Clinical (spontaneous): threatened, inevitable, complete, incomplete or missed
- Law: legal, therapeutic or criminal



## WHO

“Unsafe” abortion

Procedure for terminating unwanted pregnancy by:

- persons lacking the necessary skills
- in an environment lacking minimal medical standards
- or both



## Cause

- Spontaneous abortion (miscarriage) occurs not as a result of medical or mechanical intervention
- Induced abortion is intentional termination of pregnancy for medical or other indications



## Spontaneous abortion

### Spontaneous abortion

- Abortion occurring without medical or mechanical means to empty the uterus
- Commonly called “miscarriage” or “early fetal loss”
- Some cases are not detected clinically
- 80% occur in the first trimester
- Difficult to know the exact incidence because of pre clinical abortion



## Pathology

- Hemorrhage in to the decidua basalis
- Necrosis of tissues
- Ovum detachment, fetal death
- Uterine contraction, cervical dilatation
- Fetal expulsion: complete or incomplete
- Blighted ovum (sac with no embryo)



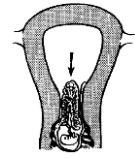
## Pathology



Hemorrhage occurs in the decidua basalis leading to local necrosis and inflammation.



The POC, partly or wholly detached, acts as a foreign body and initiates uterine contractions. The cervix begins to dilate.



Expulsion complete. The decidua is shed during the next few days in the lochial flow.



## Late pregnancy

- Maceration: retained dead fetus, degenerated internal organs, skin softens and easily peels off
- Fetal compresses: no amniotic fluid, fetus compressed and desiccated
- Fetal papyraceous: dry compressed fetus resembling parchment



## Etiology

- Exact cause of spontaneous abortion are not always clear
- Half are due to chromosomal anomalies
- The incidence of chromosomal anomaly is less in late gestations

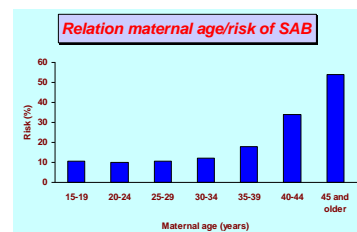


## Risk factors

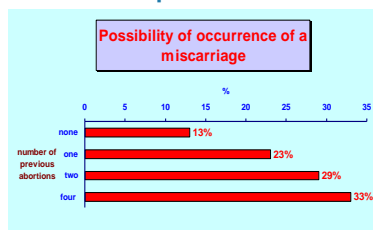
- Advanced maternal age (over 40)
- Advanced paternal age
- Higher parity
- Prior spontaneous abortions
- Inter pregnancy interval of less than 3 months



## Risk factors - maternal age



## Risk factors - previous abortions



## Major causes of abortion

- Fetal: embryo, fertilization, implantation
- Maternal
- Paternal



## Fetal factors

- Abnormal zygote development (zygote, embryo, early fetus or placenta )
- 40% of spontaneous abortion in less than 20 weeks have morphologic abnormality

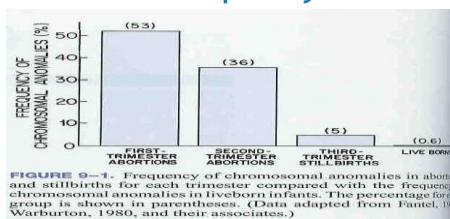


## Fetal factors: Aneuploidy

- Autosomal trisomy
- Monosomy
- Polyploidy
- Chromosomal structural abnormalities



## Aneuploidy



## Fetal factors: Autosomal trisomy

- Most common chromosomal anomaly in early pregnancy loss
- 75% occur in less than 8 weeks
- Most trisomies result from isolated non disjunction
- 13, 16, 18, 21, 22 autosom



## Fetal factors: Monosomy X

- Second most common chromosomal anomaly
- Cause late abortion
- It is not compatible with life



## Fetal factors: Polyploidy

- Triploidy: associated with hydatidiform (molar pregnancy)
- Tetraploidy: rare but may be born alive



## Fetal factors: Euploidy

- Cause late abortion
- Peak gestational age is 13 weeks
- Incidence increases with maternal age above 35 years



## Maternal factors: Infections

Can cause abortion or congenital anomaly

- *Listeria monocytogenes*
- *Chlamydia trachomatis*
- *Mycoplasma hominis*
- *Ureaplasma urealyticum*
- *Toxoplasma gondii*



## Maternal factors: Chronic illness

Chronic debilitating diseases

- Tuberculosis
- Cancer
- Celiac sprue



## Maternal factors: Endocrine

- Hypothyroidism
- Diabetes mellitus
- Progesterone deficiency: luteal phase defect
- POC



## Maternal factors: Immunologic

- Auto immune antibody
- Antiphospholipid antibodies
- Prostacyclines
- Thromboxane A2
- Anticardiolipin AB



## Maternal factors: Environmental

- Tobacco: 14 cigarettes per day - 2x
- Alcohol: three x per week - alcohol fetal syndrome - 3x
- Coffee: four coffee cups per day - slightly increased
- Radiation
- Drugs



## Maternal factors: Uterine defects

- Congenital: septated, unicornate, bicornate
- Acquired: uterine synechie, Asherman syndrome, incompetent cervix, Myoma

NB: Myoma rarely causes abortion



## Maternal factors: Other

- Physical trauma
- Psychological problems
- Advanced age
- Malnutrition
- Surgery - Laparotomy
- Stress
- Contraception - IUCD



## Paternal factors

- Little is known in the genetics of spontaneous abortion
- Defective gametogenesis is seen in 5% of cases
- Chromosomal translocations in sperm can lead to spontaneous abortions



## Stages of spontaneous abortion

- Threatened
- Inevitable
- Incomplete
- Complete
- Missed
- Septic
- Recurrent/habitual



## Stages of spontaneous abortion



## Threatened abortion

- Characterized by lower cramp and vaginal spotting
- The pregnancy can continue till term



## Threatened abortion

### Sign and Symptoms

- Minimal vaginal bleeding
- Minimal lower abdominal cramp
- Stable vital sign
- Cervix closed
- Symptoms resolve in a few days



## Threatened abortion

### Management

- Almost 50% ends in abortion
- High risk of preterm labor and birth
- No effective treatment
- Bed rest, analgesia, sedation, avoid sex, avoid douche, heavy activities
- Serial beta HCG, progesterone, US, U/A, CBC, BG RH, culture and sensitivity



## Inevitable abortion

- Continuous bleeding and cramp leading to cervical dilatation and effacement but no expulsion of fetus or placenta
- Pregnancy is unlikely to continue



## Inevitable abortion

### Sign, symptoms

- Bleeding for more than three days
- Lower abdominal pain of more than seven days
- Cervical dilatation of more than 3 cm
- Effacement more than 80%
- Membranes may be ruptured



## Inevitable abortion

### Management

- Proper clinical assessment
- Hg, beta HCG, WBC, US
- Manage emergency conditions
- Evacuate
  - medical
  - surgical



## Incomplete abortion

- Passage of some products of conception or placental tissue from the uterine cavity
- Typically present with bleeding that can produce hemodynamic instability
- Usually there is no viable conceptus





## Complete abortion

- All products of conception have been expelled.
- Once all products of conception have passed, pain and bleeding soon cease.



## Missed abortion

- Fetal death without expulsion of any fetal or maternal tissue for at least 4 weeks thereafter.
- There may or may not be vaginal bleeding .
- Pregnancy symptoms regress



## Missed abortion

- Ammenoric, dark bleeding
- Regression of pregnancy symptoms
- Negative gestational age discrepancy with LNMP
- Can be expelled spontaneously
- Can cause coagulation defect



## Septic abortion

- Any type of abortion that is accompanied by uterine infection.
- Endometritis is the most common manifestation
  - parametritis
  - peritonitis
- Septicemia and shock may occur if the local infection is left untreated.



## Clinical assessment

- History: amenorrhea, bleeding, pain
- Physical examinations: pelvic, bimanual, speculum
- Investigations: blood, urine, ultrasonography



## Differential diagnoses

- Ectopic pregnancy
- Gestational trophoblastic disease (GTD)
- Appendicitis
- Cervicitis
- UTI, vaginitis
- Dysfunctional uterine bleeding
- Ovarian cyst



## Management

- Expectant
- Medical evacuation
- Surgical evacuation



## Management

- Pre procedure: Counseling, prophylactic antibiotics
- Intra procedure care: pain management
- Post procedure care: pain, discharge instructions, PAFP, follow up



## Three Sources of Pain

- Psychological pain due to anxiety, fear, apprehension
- Physical pain due to cervical dilatation
- Uterine cramping due to manipulation or contraction of uterus



## Non-pharmacological methods for relieving psychological pain

- Gentle, respectful interaction and communication
- Verbal support and reassurance
- Gentle, smooth operative technique



## Pharmacological Means of Addressing Psychological Pain

- NSAIDs (diclofenac, ibuprofen) can effectively relieve pain effectively
- Narcotic analgesia
- Anesthetic: paracervical block using lidocaine
- General anesthesia should be reserved for extreme cases

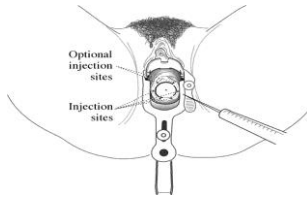


## Administering paracervical block

- Inject 1-2mL of lidocaine where tenaculum will be placed
- Place tenaculum
- Apply slight traction to move cervix, exposing transition from cervical to vaginal tissue
- Slowly inject 2-5mL of lidocaine into this tissue to depth of 1-1.5 inches at 3, 5, 7 and 9 o'clock



## Paracervical Block



## Recurrent abortion



## Recurrent abortion

- Occurrence of three or more consecutive spontaneous abortions
- The prognosis depends on the cause
- Types
  - Primary: no prior child
  - Secondary: at least one prior child



## Causes of recurrent abortion

- Parental chromosomal abnormalities
- Structural Uterine Defects
- Immunological Factors
  - Autoimmune Factors
    - Lupus erythematosus
    - Antiphospholipid syndrome
- Endocrinological Factors
  - Luteal phase defect
  - Polycystic Ovarian Syndrome
  - Diabetes Mellitus
- Thrombophilic Disorders



## Incompetent Cervix

- Pregnancy loss by painless cervical dilatation in the second trimester
  - Prolapse of membranes into the vagina
  - Expulsion of an immature fetus
- This sequence may repeat in future pregnancies



## Incompetent Cervix

### Etiology

The cause of cervical incompetence is obscure.

- In utero DES exposure
- Trauma to the cervix
  - D&C
  - Conization
  - Cauterization
  - Amputation of the cervix



## Incompetent Cervix

### Diagnosis

- US
- Hysteroqram
- Balloon catheter

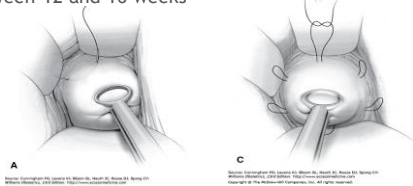
### Treatment

- Prophylactic cerclage
  - McDonald
  - Modified Shirodkar



## Incompetent Cervix

Treatment: Elective cerclage generally is performed between 12 and 16 weeks



## Uterine synechie / Asherman syndrome

Partial or complete adhesion of uterine cavity

- Etiology: Curettage
- Diagnosis: US, hysteroqram, multiple filling defect
- Treatment: hysteroscopy, lysis
  - IUCD
  - Endometrial proliferation
  - Estrogen



## Post abortion care (PAC)



## PAC

- Post abortion care is a medical service and related interventions designed to manage incomplete, unsafe abortions and their complications
- Include management of complications, PAFP and other RH problems



## Elements of PAC

- Treatment of abortion and abortion related complications
- Counseling
- Contraceptive and family planning services
- Reproductive and other health services
- Community and service provider partnership



## Induced abortion

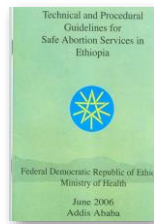


## Induced abortion

- Intentional medical or surgical termination of pregnancy
- Elective/voluntary abortion; done by the will of the woman



## Guidelines



## Ethiopian law: penal code

TOP by a recognized medical institution with in the period permitted by the profession is not punishable where:

1. The pregnancy is the result of rape or incest
2. Pregnancy endangers the life of the mother or the child or the health of the mother, or where the birth of the child is a risk to the life or health of the mother
3. Fetal Deformity
4. Unable to raise child due to physical and mental disability or being a minor



# Thank You



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