



Abortion

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Topics



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01

Introduction

Definition

Miscarriage

- Clinically recognised pregnancy loss before 20th week of gestation
- Expulsion or extraction of an embryo or fetus weighing 500gm or less(WHO)

02

Epidemiology





About 20 to 30% of women with confirmed pregnancies bleed during the first 20 weeks of pregnancy; half of these women spontaneously abort. Thus, incidence of spontaneous abortion is up to about 20% in confirmed pregnancies.

Incidence

- Frequency decreases with increasing gestational age
- Incidence: 8-20% (clinically recognised pregnancies)
- Women who had a child: 5% incidence of miscarriage
- 80% spontaneous abortion :< 12 wks





03

Etiology



Early spontaneous abortion is often caused by **chromosomal abnormality**

Maternal reproductive tract abnormalities (eg, bicornuate uterus, fibroids, adhesions) may also cause pregnancy loss through 20 weeks gestation.

Isolated spontaneous abortions may result from **certain viral infections**—most notably cytomegalovirus, herpesvirus, parvovirus, and rubella virus.



Other causes include **immunologic abnormalities and major physical trauma.**

Most often, the cause is unknown

Etiology

01

Fetal

02

Maternal

03

unexplained

Fetal factors

- Chromosomal abnormalities(50%)
 - aneuploidies ,monosomy X,Triploidy
 - Trisomy 16 : mc autosomal trisomy,lethal
- Congenital anomalies
- Trauma

Maternal factors

- Maternal endocrinopathies: hypothyroidism, insulin dependant diabetes
-
- Congenital or acquired uterine abnormalities: interfere with implantation & growth
- Maternal reproductive tract abnormalities: (bicornuate uterus, fibroids, adhesions) may also cause pregnancy loss through 20 weeks gestation.

- Maternal diseases: acute maternal infection (listeria, toxo, parvo B19, rubella, CMV)
- Radiation in therapeutic doses Hypercoagulable state (thrombophilias): RPL



Other factors

- Low plasma folate levels($\leq 2.19\text{ng/ml}$): no specific evidence to support
- Extremes of maternal weight: prepregnancy BMI <18.5 OR $>25\text{kg/m}^2$
- Maternal fever: $100^\circ\text{F}(37.8^\circ\text{C})$, no evidence to support

04

Classification





Post diagnostic classification

- ❑ Based upon the location of POC
- ❑ Degree of cervical dilatation(pelvic exam)
- ❑ Pelvic ultrasound





- ❑ Categorization impacts clinical management
- ❑ **Threatened**
- ❑ **Inevitable**
- ❑ **Incomplete/complete**
- ❑ **Missed**







Threatened abortion

Patients have uterine bleeding and it is too early to assess whether the fetus is alive and viable and the cervix is closed. Potentially, the pregnancy may continue without complications.

- Vaginal bleeding has occurred
 - The cervical os is closed
 - Diagnostic criteria for spontaneous abortion has not met
 - Managed expectantly: until symptoms resolve or progresses
- 
- 



Threatened abortion: m/m

- ❖ Expectant
 - ❖ Progestin treatment: most promising, efficacy not established
 - ❖ Bed rest: randomised trials have refuted the role
 - ❖ Avoid vigorous activity
 - ❖ Avoid heavy lifting
- 
- 

- 
- 
- ❖ Avoid sexual intercourse



Threatened abortion :m/m

- Counsel about risk of miscarriage
- Return to hospital in case of additional vaginal bleeding, pelvic cramping or passage of tissue from vagina
- Repeat pelvic USG until a viable pregnancy is confirmed or excluded





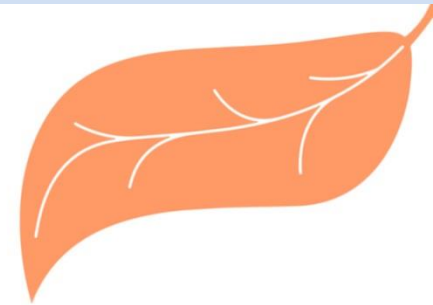
- Viable pregnancy, resolved symptoms: prenatal care
- If symptoms continue: monitor for progression to inevitable, incomplete, or complete abortion

Inevitable abortion

- Vaginal bleeding, typically accompanied by crampy pelvic pain



- Dilated cervix(internal os)
- Products of conception felt or visualised through the internal os



Incomplete abortion

- Vaginal bleeding and/or pain present
- Cervix is dilated

- Products of conception partially expelled out
- Uterine size less than period of amenorrhea



Complete abortion

The products of conception have passed and the cervix is closed .



Missed abortion

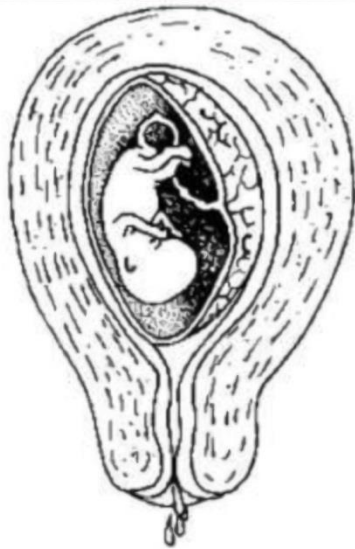
Death of an embryo or a fetus is confirmed, but there is no bleeding or cervical dilation and the products of conception have not been expelled.

- Non viable intrauterine pregnancy
- Cervical os is closed



- POC not expelled

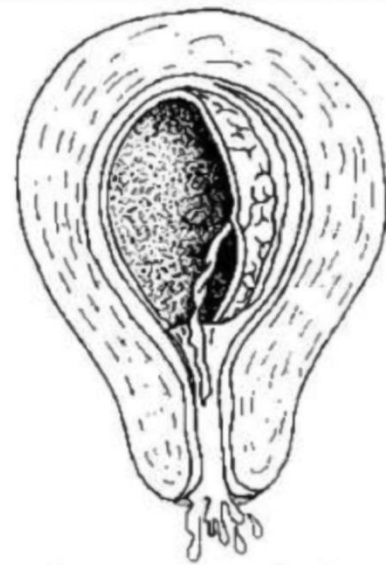




Threatened



Imminent



Incomplete

05

Risk Factors



Risk factors for spontaneous abortion

- Extremes of maternal age
- History of spontaneous abortion
- Cigarette smoking
- Use of certain substances (eg, cocaine, alcohol)
- A poorly controlled chronic disease (eg, diabetes, hypertension, overt thyroid disorders) in the mother
- Subclinical thyroid disorders, and minor trauma have not been shown to cause spontaneous abortions

Risk factors

Mechanisms responsible for abortion: not apparent

- Advanced maternal age
- Previous spontaneous abortion
- Medications & substances (smoking)

Medications or substances

- Heavy smoking(> 10 cigarettes/day) : vasoconstrictive & antimetabolic effects of tobacco smoke.
- Moderate to high alcohol consumption(>3 drinks/week).
- NSAIDS use(acetaminophen): abnormal implantation & pregnancy failure due to antiprostaglandin effect.

Maternal age

Most important risk factor in healthy women

- 30yrs: 9-17%
- 35yrs: 20%
- 40yrs: 40%
- 45yrs: 80%

Previous spontaneous abortion

- Previous successful pregnancy: 5% risk
- 1 miscarriage: 20%
- 2 consecutive miscarriages: 28%
- ≥ 3 consecutive miscarriages: 43%

Thanks For Your
Attention

