SPONTANEOUS ABORTION (Miscarriage)

DEFINITIONS:

- Complete - all products of conception (POC) passed.
- Incomplete - some POC passed; some of embryo/fetus, placenta or membranes remain.
- Inevitable - cervix is dilated, POC not passed.
- Anembryonic – no yolk sac or embryo on ultrasound
- Missed - embryonic/fetal demise, POC retained.
- Septic - any spontaneous abortion with intrauterine infection
- Threatened - bleeding before 20wks

LMP may not accurately predict the amount of tissue to be passed because miscarriage symptoms usually begin days to weeks after the pregnancy is no longer viable.

FIRST TRIMESTER (based on uterine size or size of gestational sac)

- Common – approx. 20 – 30 % of all pregnancies, the higher rates associated with maternal age, smoking and alcohol use.
- Many causes – mostly chromosomal, some endocrine (diabetes) or autoimmune[1]
- Not caused by exercise, intercourse, emotional upset, hormonal contraception.[1]
- Needs to be grieved by both partners, often differently.

Management Options:

1. Expectant Management: Safe unless infection, heavy bleeding or possible ectopic.
    - Provide pain medication, give info re: warning signs of heavy bleeding (over 2 soaked pads per hour for 2 hours), infection (temp, non-crampy pain). Less effective than medical or surgical management.
    - Follow up in 3 – 4 weeks to check on completeness.
    - Provide contraception.

[1] "Abortion" in Cunningham FG, MacDonald PC, Grant NF, Leveno KJ, Gilstrap LC, Hankins GDV, Clark SL (eds): Williams Obstetrics, 20th edition. Stamford, Appleton & Lange, 1997.

2. Medical Management (still no consensus on dosing): [2]

Misoprostol	route	timing	efficacy
800 mcg	vaginal	up to 2 doses, 24 hrs apart	80-89%
400 mcg	vaginal	up to 3 doses, 48 hrs apart	83%(overall)
600 mcg	oral	up to 2 doses, 4 hrs apart	70%

800 mcg vaginal x 1, is over 90% effective for women who had vag bleed within last 24hr, and are G1 or G2.[3]
Mifepristone may improve effectiveness especially with anembryonic pregnancy

3. Surgical Management:
   Suction curettage necessary if heavy bleeding or infection, otherwise optional.
   Procedure is the same as for elective abortion.

SECOND TRIMESTER

- Less common, more likely from infection, autoimmune, trauma, less likely to be from chromosomal abnormalities.[1]
- Not caused by exercise, intercourse, emotional upset, hormonal contraception.
- Needs to be grieved by both partners, often differently.

- Medical Management:
  (no consensus on dosing, use lower dose at higher gestational age because of increase in receptors):
  Only if no previous uterine scar (pt has had no c-sections)
  Misoprostol 600mcg vaginal, then 400mcg q 4h x5.

- Surgical Management: More likely to be necessary.

[2] Ipas web site, accessed 4 15 07
[3] Crenin M, Huang X, Westhoff C, *et* al. Factors Related to Successful Misoprostol Treatment for Early Pregnancy Failure. Obstet & Gyn 2006;107:901-907.

Algorithm for management of SAB [4]

- Pt <20 weeks gestational age, bleeding
  If hemodynamically unstable, stabilize
  If febrile, rule out septic abortion.
  If peritoneal signs, rule out ectopic

- If origin of blood intrauterine,
  R/O ectopic with ultrasound, serial beta hCG, progesterone levels

- If pregnancy intrauterine, assess viability:

Test	Viable	Nonviable	Uncertain
progesterone	> 25 ng/ml	<5 ng/ml	5-25 ng/ml
Beta hCG	> 66% increase in 48 hrs	Plateau/decrease	equivocal
ultrasound	Normal for gestational age	nonviable	nondiagnostic

- If viable pregnancy, give Rhogam if Rh (-)

- If non-viable and no complications, offer 3 options for management.

- If uncertain, do beta hCG every 2 -3 days and ultrasound every week until diagnosis made.

- If hCG decreases by 20% in 48h or 60% in 7 days, probably is complete

[4] Greibel CP, Halvorsen J, Golemon TB, Management of Spontaneous Abortion. AFP 72(7):1243-1250. 2005.