

Complications of Pregnancy

Complications that arise during pregnancy are often challenging and demand the perinatal nurse's skills, knowledge, and expertise, combined with the nursing process, to first identify the pregnant patient at risk and then formulate, implement, and evaluate an appropriate, holistic plan of care.



Antenatal care (ANC)

Antenatal care (ANC) is intended to detect and treat or prevent complications of pregnancy such as:

Ectopic pregnancy

Pregnancy induced hypertension (PIH)

Diabetes

Infections

Anemia

Birth defects/chromosomal anomalies screening

Risk factors that can cause complications during pregnancy

common diseases and conditions that can cause complications:

- Diabetes
- Cancer
- High Blood Pressure
- Infections
- Sexually Transmitted Diseases
- Kidney Problems
- Epilepsy
- Anemia

Other factors that may increase your risk for complications include:

- Late pregnancy (≥ 35 years)
- Young age pregnancy
- Anorexia
- Smoking cigarettes
- Drinking alcohol or illegal drugs
- Abortion or preterm birth
- Carrying multiples

Stages of Pregnancy Complications

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graph TD; A[Stages of Pregnancy Complications] --> B[Early Pregnancy Complications]; A --> C[Late Pregnancy Complications];
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Early Pregnancy Complications

- Hyperemesis gravidarum
- Spontaneous abortion/ miscarriage
- Gestational trophoblastic disease
- Ectopic pregnancy
- Perinatal loss

Late Pregnancy Complications

- Gestational diabetes.
- Preeclampsia.
- Preterm labor.
- PROM.
- Placenta problems.
- IUGR.
- Post-term.
- Malpresentation.

Hyperemesis Gravidarum

- ❑ **Hyperemesis Gravidarum:** Women with severe nausea & vomiting. The vomiting & reduced appetite leads to weight loss and dehydration. The major difference between HG & normal morning sickness is that HG results in a weight loss of 5 percent or more of your pre-pregnancy weight.

- ❑ Treatment methods include a range of options, including:
 1. Maternal diet and lifestyle alterations.
 2. Intravenous fluids (IV).
 3. Tube feeding.
 4. Medications such as metoclopramide, antihistamines, and antireflux medications.

Abortion and Miscarriage

❑ **Abortion** is the termination of a pregnancy by removal or expulsion of an embryo or fetus. An abortion that occurs without intervention is known as a miscarriage or "spontaneous abortion" and occurs in approximately 30% to 40% of pregnancies.

❑ Types of Abortion:

1. Induced abortion: when deliberate steps are taken to end a pregnancy, or less frequently "induced miscarriage"
2. Miscarriage: is unintentional expulsion of an embryo or fetus before the 24th week of gestation.

❑ Methods:

1. Medical.
2. Surgical.
3. Labor induction abortion.
4. Other: Traditional medicine, trauma, self-induced & etc.

Ectopic Pregnancy

Definition: Extra-uterine pregnancy in fallopian tubes, ovary or abdominal cavity which accounts 1.3-2% of pregnancies.

Mortality:

In developing countries: 100-300 deaths/10,000

Presentation:

Pelvic pain and vaginal bleeding (> 5-8 weeks early)

Shock, hemorrhage, acute abdominal emergency (late presentation)

Woman with a missed period or known pregnancy

Risk factors:

Tubal surgery, PID, Multiple sex partner, Induced abortion, Smoking, Age > 40, IUD, Sterilization, Prior ectopic & DES

Diagnosis & Treatment of ectopic pregnancy

Diagnosis



1. Clinical suspicion (bleeding or lower abdominal pain)
2. Serial hCG (high in ectopic)
3. Progesterone (lower in ectopic)
4. Transvaginal ultrasound

Treatment



1. Early unruptured ectopics
 - Salpingostomy
 - Methotrexate
2. Ruptured or later ectopics, or ovarian/abdominal ectopics
 - Laparotomy

Hypertension in pregnancy

- Pre-existing hypertension before pregnancy or < 20 weeks gestation; 3-5% of pregnancies)
- Pregnancy associated hypertension (PAH) >20 weeks; no proteinuria; ~6-7% of pregnancies
- Pre-eclampsia, hypertension with proteinuria 5-6% of pregnancies
- Superimposed hypertension. 25% of women with pre-existing hypertension develop pre-eclampsia
- Eclampsia, convulsions in a woman with hypertension and proteinuria.

Pre-eclampsia

☐ Preeclampsia (toxemia or PIH)

BP : ≥ 140 mmHg systolic or 90 diastolic

Proteinuria : 0.3 g per 24 hours

Edema +/-

Placental insufficiency 30%

Disturbances of coagulation & liver function

Major risk to mother (eclamptic convulsions)

Risk to fetus (IUGR/PTD, placental abruption, stillbirth) due to placental insufficiency or maternal convulsions



Preclampsia

Preclampsia is a pregnancy complication characterized by **High Blood Pressure** and signs of damage to another organ system, Most often to the **Liver and Kidneys**



Proteinuria

Protein in urine. The condition is often a sign of Kidney disease



HELLP Syndrome

Breakdown of Red Blood Cells and complications with the Liver



Blood pressure that exceeds 140/90mm Hg or higher



Water retention and swelling

Other symptoms



Severe headache



Changes in vision



Upper abdominal pain



Nausea or vomiting



Decrease in urine



Shortness of breath

Eclampsia

❑ Maternal/fetal death

Rate ~ 0.06-1% in developing countries

50,000 maternal deaths due to eclampsia

❑ Pathophysiology

- Unknown (“disease of theories”).

Endothelial functional abnormalities, possibly related to immune reaction to paternal antigen in the placenta,

genetic factors (some men present greater risk)

dietary deficiency (calcium)

Risk Factors for Pre-eclampsia & Eclampsia

- Previous pre-eclampsia
- Nulliparous
- Paternal factors
- Genetic factors, familial history
- Calcium deficiency
- History of spontaneous abortion
- African American (nulliparous only)
- Higher body weight
- Ovum donation
- Smoking

Treatment for Pre-eclampsia & Eclampsia

Pre-eclampsia



1. Antihypertensive
2. Corticosteroids
3. Anticonvulsants
4. Calcium Supplements
5. Bed rest
6. Hospitalization
7. Delivery

Eclampsia



1. Magnesium sulfate
2. phenytoin & diazepam
3. Antihypertensive
4. Hospitalization
5. Delivery

Gestational Trophoblastic Disease

- **Hydatidiform mole**
 - Neoplasm of the placenta (chorion), forming grape like cysts. Usually no fetus or dead fetus
- **Choriocarcinoma**
 - Malignant cancer of the placenta

Diabetes in pregnancy

❑ Pre-gestational diabetes

Pre-existing type 1 or 2 diabetes in a pregnant woman

Rates increasing due to obesity and delayed child bearing

❑ Gestational diabetes

Diagnosed in pregnancy

Due to insulin resistance

Risk factor for subsequent diabetes

Complications

• Maternal

Increased hypertension and preeclampsia

• Infant

Macrosomia (birth weight > 4 kg),

Shoulder dystocia

Birth defects

Metabolic abnormalities



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THANK YOU