

The Antepartum Period/STD's

Disorder: Candidiasis

Cause: Fungal

Symptoms:

Female: Vaginal itching burning, cream cheese like discharge

Risk During Pregnancy: increased risk of infection due to increased estrogen production

Risk to Fetus / Newborn: born with Thrush or Candidiasis

Chances of infection increase with antibiotic treatment, diabetes, or an increase of estrogen

Disorder: Trichomoniasis

Cause: one cell Protozoon

Incubation: 4-20 days

Symptoms:

Male: mostly asymptotic but may have sign as seen in women

Female: Extreme itching, frothy white or gray/green discharge

Risk During Pregnancy: may lead to preterm birth

Risk to Fetus / Newborn: Medication use for treatment is a teratogenic in the 1st trimester so treatment is delayed until the 2nd trimester

Disorder: Chlamydia

Cause: Bacteria

Incubation: 1-5 weeks

Symptoms:

Female: gray/white discharge, vaginal itching

Risk During Pregnancy: treated with erythromycin instead of with tetracycline, may cause premature rupture of membranes, preterm labor or endometriosis

Risk to Fetus / Newborn: Conjunctivitis, respiratory infection, or pneumonia

Disorder: Genital Warts

Cause: Human papilloma virus

Symptoms:

Male: penile warts

Female: warts on vulva, vagina, and cervix

Removed by podophyllin, cautery or cryotherapy

Disorder: Genital Herpes

Cause: HSV-2 Skin to skin, mucus membrane contact

Incubation: 3-14 days

Symptoms:

Male: Primary lesion appears, flu like symptoms, increased

temperature, and intense pain

Female: Primary lesion appears, flu like symptoms, increased temperature, and intense pain. May increase the risk of cervical cancer and a yearly Pap smear is recommended

For both: flare up may occur at any time brought on by stress, sunlight, PMS and illness

Risk during Pregnancy: Will need a cesarean delivery

Risk to Fetus / Newborn: May be fatal to newborn if contracted in the birth canal.

Disorder: Gonorrhea

Cause: gonococcus bacillus

Incubation: 2-7 day

Symptoms:

Male: pain on urination, may scar the tubules of the testes leading to sterility

Female: mostly asymptotic but may have signs as seen in men. May develop into a PID and scar the uterine tubes leading to sterility

For Both: May develop into arthritis or heart disease

Risk to Fetus / Newborn: Ophthalmia Neonatorum, a form of Conjunctivitis, if untreated will lead to blindness

Disorder: Syphilis

Four stages

First Stage

Painless ulcer form on genitals, mouth, lips, or rectum fade within six weeks

Second Stage

Rash forms on the palms and soles also may have a low-grade fever

Third Stage – Latent stage

Asymptotic period lasting years to decades

Final Stage

Neurological disorders such as blindness, paralysis, mental confusion, loss of balance, slurred speech and death

Risk to Fetus / Newborn: No problems in the first 18 weeks, after 18 weeks preterm labor, still birth, and congenital defects

The Antepartum Period

Fetal Development

Fertilization - occurs in fallopian tube about 2 – 4 days after ovulation

Implantation – attachment of blastocyst to uterine wall about 6 – 8 days after fertilization

Placenta – formed of fetal (chorionic villi) and maternal (deciduas basalis) parts; fully developed by end of 3rd month of pregnancy; nutritive, respiratory, excretory, & endocrine functions

Umbilical cord – 1 vein carrying oxygen & nutrients from mom to fetus; 2 arteries carrying fetal

waste away from the fetus back to the mother

Organogenesis – Embryo = 1st 8 weeks; rapid growth & development so most susceptible to maternal pathologies & teratogens

Maternal Changes

Hormones:

Estrogen & progesterone - increase (from corpus luteum, then from placenta)

Human chorionic gonadotropin (hCG) - from embryological/fetal chorion, detectable in mom's

blood by 3rd week gestation → maintains corpus luteum

Relaxin – from placenta → relaxes pelvis so fetus can get out

Human chorionic thyrotropin (hCT) – elevates mom's basal metabolic rate

Nutrition

Average weight gain of 25 – 35 lbs, but pattern of weight gain is more important than actual amount of weight.

Must consider cultural, economic & psychological needs in assessing diet

Increase: about 300 calories/day

protein for growth demands

vitamins & minerals to prevent anemia

calcium to meet fetal needs, preventing maternal hypocalcemia

folic acid to prevent neural tube defects

fluids & fiber to prevent constipation

Avoid: dieting - decreasing calories or fluids

decreasing Na⁺, unless doctor recommends, as the fetus needs Na⁺

Signs of Pregnancy

Presumptive Signs – subjective, could be a lot of other things

Amenorrhea, nausea, urinary frequency, breast or pigmentation changes, fatigue

Probable Signs – more objective, but still could be caused by something other than pregnancy

Chadwick's sign – purple hue to vagina

Goodell's sign – cervical softening

Hegar's sign – softening of lower uterine segment

Braxton-Hicks contractions

Positive pregnancy test

Enlargement of uterus

Ballottement – feeling fetal outline

Positive Signs – objective and only produced by a developing fetus

Fetal heart beat

Fetal outline felt by examiner

Ultrasound shows fetal heart beat

Ultrasound shows fetus

Estimated Date of Delivery

Nagele's Rule – 1st day of last menstrual period; add 7 days; subtract 3 months; add 1 year.

Example: If 1st day of last period = June 10, 2001 → + 7 = 17th, June – 3 months = March → EDD = March 17th, 2002.

Fundal height (measure from pubic symphysis to top of fundus) will rise 1 cm per week (with a single fetus in residence). At 20 weeks, it should be at the umbilicus; at 36 weeks it should be at the xiphoid process.

Physiological Changes in Mom

Cardiovascular

Physiologic anemia 45 – 50% increase in blood volume, more plasma than RBC

Cardiac output increases 25 – 50% with peak at 28 – 32 weeks

Heart rate increases 10 – 15 bpm in 2nd half of pregnancy

Supine hypotensive syndrome = vena caval syndrome – lie on back → uterus presses on

vena cava → decrease CO → hypotension

Varicose veins – legs, perianal (hemorrhoids)

Edema of extremities last 6 weeks R/T blood stasis

Risk for thrombophlebitis as clotting factors increase

GI

Progesterone relaxes smooth muscle → Decreased gastric motility & relaxed esophageal

sphincter → heartburn, nausea/vomiting, constipation

Morning sickness caused by increasing hCG and progesterone levels

Excessive salivation caused by estrogen

Softening of gums → gingivitis

Respiratory

3rd trimester, big uterus pushes on diaphragm → dyspnea until lightening at 38 weeks

Nasal congestion R/T estrogen

Hyperventilation so mom can blow off extra CO₂ from fetus

Integument

Melasma – mask of pregnancy

Linea nigra – on abdomen

Striae on abdomen & legs

Darkening of areola

Excretory

Urinary frequency R/T increased waste management increasing urinary output & uterus

pressing on urinary bladder in early & late pregnancy

Increased urinary output → decreased specific gravity with glycosuria

Bladder tone decreased R/T progesterone

Enlarged uterus presses on right ureter & kidney → dilation of those structures

Skeletal

Joints loosen R/T relaxin & estrogens
Hypocalcemia → leg cramps

Risks**Iron Deficiency Anemia**

Increased RBC production → need increased iron for production of hemoglobin
Loss of iron in sweat, feces, hair, (menstruation)

Characteristics:

Microcytic, hypochromic RBCs
smooth tongue
pica

Erythroblastosis Fetalis = Hemolytic Disease of the Newborn

Rh incompatibility: Rh negative mom pregnant with Rh positive fetus. First fetus OK as mom is not exposed to baby's blood until birth (unless microtears in placenta allow fetal blood to mix with mom's). But if next fetus is also Rh+ & mom has been "inoculated" with Rh+ blood from 1st pregnancy, so now she has anti-Rh antibodies that can cross the placenta to attack the next fetus. This is prevented if mom receives RhoGAM (passive immunity) in the 28th week & within 72 hours of delivery.