

Iron Deficiency Anemia: Maternal problems associated with deficiency

- Infections
- Fatigue
- Preeclampsia
- Postpartum hemorrhage
- Decreased blood loss tolerance
- Iron deficiency anemia is totally fixable for the most part...nutrition! Iron supplements are usually given to women in the prenatal period

Iron Deficiency Anemia: Fetus

- Low birth weight babies b/c they have not gotten perfused as much with oxygen-rich blood
- Prematurity
- Stillbirth
- Neonatal death
- The placenta is "stringy" or skinny

Iron Deficiency

- Prevention: 27 mg of iron daily
- Treatment: 60-120 mg of iron daily; prenatal vitamins have iron in them

Folate Deficiency (Vit B9?)

- Maternal: Nausea, vomiting, anorexia
- Fetal: Neural tube defects such as spina bifida, opened-up spine...all kinds of things.

Folate Deficiency

- Prevention: 0.4mg folic acid daily
- Treatment: 1mg folic acid daily plus iron supplements

Sickle Cell : Maternal

- Vaso-occlusive crisis...put baby on monitor 24/7 until crisis passes.
- Infections (can trigger an event)
- Congestive Heart Failure
- Renal Failure
- The sickled cells don't carry oxygen as well...
- Ensure hydration status is good...give oxygen also to increase flow to fetus. Probably put her on ABX and analgesics
- Mom is probably going to be induced and have oxygen on the whole time. Don't want to do a C-Section unless you absolutely have to.

Sickle Cell : Fetus

- Death (high incidence of SAB)
- Prematurity
- IUGR (intrauterine growth restriction)
- Treatment
 - Folic Acid for mom
 - Prompt infection control
 - Prompt response to vaso-occlusive crisis

Thalassemia

- This is an autosomal recessive disorder
- It's not very common
- The cells are teeny tiny (microcytic red cells). The anemia can cause really low Hgb levels (around 5)...really need to transfuse them at this point...that is LOW!
- The cells don't live very long. Prone to having hepatosplenomegaly!

- Treatment
 - Folic Acid
 - Transfusion
 - Chelation therapy
- Nursing care is all about trying to prevent infections, work on the anemia, keep the fetus healthy, monitor fetus frequently with ultrasound.

HIV in Pregnancy: Maternal

- Asymptomatic women – pregnancy has not effected this.
- Women with low CD 4 will experience acceleration of the disease.
- Zidovudine (ZDV) therapy diminishes risk of transmission to fetus (BIG ISSUE)
- Breastmilk transmission...HIV goes right straight through the breastmilk. Transmission via breastmilk usually doesn't happen until after 3 months.
- Half of all infection is during L/D

HIV Effects on Fetus

- Infants often have positive antibody titer
- Infected infants are usually asymptomatic, but are often:
 - Premature
 - Low Birth Weight
 - Small for Gestational Age (SGA)

Treatment : Pregnancy

- Counseling...tell moms they should not be eating garlic b/c it interferes with the medication.
- Antiretroviral therapy
- Fetal testing can be done
- C-Section for delivery

Cardiac Disorders in Pregnancy

- Congenital Heart Disease
- Marfan Syndrome (autosomal dominant)
 - Disorder of CT of heart
 - Will have to watch this mom very carefully
- Peripartum Cardiomyopathy
 - Dysfunction of left ventricle...tends to occur toward end of pregnancy (last 4-6 weeks) and even postpartum.
 - Usually presents with anemia and infection.
 - This defect has remained unknown until pregnancy when increased demand make the impairment evident.
 - 1:3000 live births
 - Mortality up to 50%
 - S&S are related to congestive heart failure
- Eisenmenger Syndrome
 - Left to right shunting occurs in people who are born with septal defects
 - Cannot be corrected
 - Shunting results in pulmonary HTN
 - Mortality rates up to 50%
- Mitral Valve Prolapse
 - Usually asymptomatic; < 20% of people have it
 - Once the valve starts to prolapse into left atrium...then woman starts to get a lot of irregular heart rhythms and some mitral regurgitation.
 - Women will tolerate pregnancy pretty well...but be very careful that they do not get infections
 - Prognosis is "fine"
 - Will probably be most bothered by symptoms of heart palpitations, may have pain and SOB caused by cardiac arrhythmias.
 - Helps mom to limit caffeine intake to help with palpitations

- Probably put them on Enderol
- Do NOT give prophylactic abx...that's old school. Now we treat episodically.

Clinical Therapies: Criteria Committee of the New York Heart Association

- Class 1: person has no limitations; probably asymptomatic; no fatigue or palpitations with activity; things that would make it bothersome would be extra exertion in pregnancy (beyond the norm)
- Class 2: slight limitations; ordinary physical activity doesn't cause undue fatigue or pain, but do have cardiac insufficiency; when start adding more stress/work they will have more symptoms.
- Class 3: marked limitation; would discourage this person from even getting pregnant 25 years ago; comfortable at rest, but anything other than ordinary physical activity is going to cause fatigue, angina, dyspnea, palpitations. They can go grocery shopping, but probably can't carry the groceries; won't be climbing stairs
- Class 4: inability to carry on any physical activity w/o discomfort; even at rest will have pain, palpitations, discomfort, dyspnea. Just walking around the house is too much.

• Labor and Childbirth

- Class 1 & Class 2: spontaneous labor and adequate pain relief is recommended...pretty normal pregnancies
- Class 3 & 4: may need to be hospitalized before onset of labor for cardio stabilization.
 - Will be reducing anemia to relieve strain on the heart
 - Will take care of all infections ASAP
 - Will screen every month for asymptomatic bacteriuria (sp?)
 - High incidence of developing pyelonephritis (which puts a direct load on the heart)
 - Will be on cardiac drugs: heparin does not cross placenta, probably on a diuretic to decrease CHF symptoms (recall that pregnancy increases fluid volume by 50%)

Nursing Assessment

- Functional capacity
- Pulse, respirations, B/P compared to normal
- Monitor activity level including rest
- Look for signs of strain on heart
- Watchful for CHF...listen to lungs, check for edema (not ankle edema...look at hands and face!), monitor I&Os, daily weights etc...

Nursing Plan: Antenatal

- Meet physio and psych needs
- Teach recognition of signs of complications
- Dietary needs and changes
 - Essential nutritional counseling is vital!
- Bi weekly visits

Nursing Plan: Labor/ Delivery

- Close monitoring of vital signs
- Auscultation of lungs...they can get noisy fast.
- Ensure cardiac emptying
- Oxygenation – semi Fowlers position
- Support
- EFM (fetal monitoring)

Nursing Plan: Postpartum

- Very close monitoring...not out of the woods yet!
- Attend to psychosocial needs: "Is the baby ok?"
- Diet and stool softeners...do not want them to strain
- Breastfeeding is good for them...will need help with this. Get her comfy in a semi-Fowler's...she will be tired but can't lie down!
- Manage fatigue...get others on board to help with baby care.

High Risk Pregnancy: Anemia HIV, Heart Disease, pg 4 of 4

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