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MEDICAL DISORDERS IN PREGNANCY

NOGS 20-21 & AMOGS PAC INITIATIVE

VOLUME - 10

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Don't Google... Ask Noogle

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From the NOGS President's Desk . . .

Dear Members,

It gives me immense pleasure to hand over the tenth volume of Patient's Information handouts which are our monthly feature. The tenth volume focuses on " Awareness about medical disorders in pregnancy ."

In recent years, patients have increasingly requested the opportunity to participate fully in their medical care. An important part of responding to this is providing educational handouts that inform patients about health problems, describe medical treatments, and promote healthy behaviours. They are useful extension of spoken communications and are also an extension of medical care. Spoken messages are forgotten quickly and so they need to be reinforced with the informative handouts. Educational handouts are an important part of the communication patents receive from health care providers.

This is our small effort to provide our members wit these ready handouts for better communication with their patients. The member can print and use them for their patients benefit. We hope that you will find them useful.

I wish to profusely thank our ever enthusiastic, ever ready NOGS member Dr. Ragini Mandlik for toiling very hard and putting it up together within a very short span of time. We deeply appreciate their super effort.

Wishing you all a very healthy patient interaction.

Sincerely,
Dr. Vaidehi Marathe
President NOGS 2020-21
Chairperson PAC AMOGS

Message from the President AMOGS...

Hello everyone,

The theme of AMOGS this year is "We for Stree". I would like to thank every AMOGSian who has helped making every woman Safer, Stronger, and Smarter.

I would like to congratulate Dr. Vaidehi Marathe and Team NOGS for this Patient education booklet. I would also like to thank the contributors and the editorial team for their contributions towards this great booklet.

The aim of this booklet is to ensure that you are able to get basic knowledge regarding different areas of women health care. I hope this booklet helps you achieve that and clears all your doubts.

Dr. Nandita Palshetkar
President
AMOGS.

INDEX

Anemia in Pregnancy

Q1. What is anemia?

- Anemia is when your blood has few red blood cells. This is makes it harder for your blood to carry oxygen or iron. This affects cells working in nerves and muscles. During pregnancy, your baby also needs your blood.

Q2. Who is at risk for anemia during pregnancy?

- Women are more likely to get anemia during pregnancy if they:
- Are strict vegetarians or vegans. They are at greater risk of having a vitamin B12 deficiencyalso.
- Have celiac disease or Crohn's disease, or have had weight loss surgery where the stomach or part of the stomach has been removed
- Women are more likely to get iron-deficiency anemia in pregnancy if they:
- Have 2 pregnancies at interval of less than 2 years.
- With twins or multiple pregnancy
- Have vomiting often because of morning sickness
- Are not getting enough iron from their diet and prenatal vitamins
- *Had heavy periods before pregnancy

Q3. What causes anemia during pregnancy?

- You can get various types of anemia during pregnancy. The cause varies based on the type.
- Anemia of pregnancy. During pregnancy, the volume of blood increases. This means more iron and vitamins are needed to make more red blood cells. If you don't have enough iron, it can cause anemia. It's not considered abnormal unless your red blood cell count falls too low.
- Iron-deficiency anemia. During pregnancy, your baby uses your red blood cells for growth and development, especially in the last 3 months of pregnancy. If you have extra red blood cells stored in your bone marrow before you get pregnant, your body can use those stores during pregnancy. Women who don't have enough iron stores can get iron-deficiency anemia. This is the commonest type of anemia in pregnancy. Good nutrition before getting pregnant is important to help build up these stores.

- Vitamin B12 deficiency. Vitamin B12 is important in making red blood cells and protein. Eating food that comes from animals, such as milk, eggs, meats, and poultry, can prevent vitamin B12 deficiency. Women who don't eat any foods that come from animals (vegans) are most likely to get vitamin B12 deficiency. Strict vegans often need to get vitamin B12 shots during pregnancy.
- Folate deficiency. Folate (folic acid) is a vitamin that works with iron to help with cell growth. If you don't get enough folate during pregnancy, you could get folic acid deficiency. Folic acid helps cut the risk of having a baby with certain birth defects of the brain and spinal cord if it's taken before getting pregnant and in early pregnancy.

Q4) What are the symptoms of anemia during pregnancy?

- You may not have any symptoms of anemia during pregnancy unless your cell counts are very low. Symptoms may include:
- Pale skin, lips, nails, palms of hands, or inner side of the eyelids
- Feeling tired
- Giddinessor dizziness
- Labored breathing
- Rapid heartbeat (palpitation)
- Trouble in concentrating
- The symptoms of anemia can be like other health conditions.
- See your healthcare provider for a diagnosis.

Q5) How is anemia during pregnancy diagnosed?

- Your healthcare provider will check for anemia during your prenatal exams. It's usually found during a routine blood test. Other ways to check for anemia may include other blood tests such as:
- Hemoglobin. This is the part of blood that carries oxygen from the lungs to tissues in the body.
- Hematocrit. This measures the portion of red blood cells found in a certain amount of blood.

Q6) How is anemia during pregnancy treated?

- Treatment will depend on your symptoms, age, severity and general health.
- Treatment for iron deficiency anemia includes taking iron supplements. Some forms are time-released. Others must be taken several times each day. Taking iron with a citrus juice, such as orange, can help your body absorb it better. . Taking antacids may make it harder for your body absorb iron. Iron supplements may cause nausea and cause stools to become dark greenish or black in color. They may also cause constipation.

Q7) What are possible complications of anemia during pregnancy?

- If you have anemia during pregnancy, your baby may not grow to a healthy weight, may arrive early (preterm birth), or have a low birth weight. Also being very tired may keep you from recovering as quickly after birth.

Q8) Can anemia during pregnancy be prevented?

- Good pre-pregnancy nutrition not only helps prevent anemia, but also helps build other nutritional stores in your body. Eating a healthy, balanced diet before and during pregnancy helps keep up your levels of iron and other important nutrients needed for your growing baby.
- Good food sources of iron include:
- Meat, Beef, pork, lamb, liver, and other organ meats.
- Poultry. Chicken, duck, turkey, and liver, especially dark meat.
- Fish. Shellfish, including (fully-cooked) clams, mussels, and oysters are good. So are sardines and anchovies. The FDA recommends that pregnant women eat 8 to 12 ounces per week of fish that are lower in mercury. These include salmon, shrimp, pollock, cod, tilapia, tuna (light canned), and catfish. Don't eat fish with high levels of mercury, such as tilefish from the Gulf of Mexico, shark, swordfish, and king mackerel. Limit white (albacore) tuna to only 6 ounces per week.
- Leafy greens of the cabbage family. These include broccoli, kale, turnip greens, and collards.
- Legumes. Lima beans and green peas; dry beans and peas, such as pinto beans, black-eyed peas, and canned baked beans.
- Yeast-leavened whole-wheat bread and rolls
- Iron-enriched white bread, pasta, rice, and cereals
- Experts recommend all women of childbearing age and all women who are pregnant take vitamin supplements with at least 400 micrograms of folic acid. Folate is the form of folic acid found in food. Good sources are:
- Leafy, dark green vegetables
- Dried beans and peas
- Citrus fruits and juices and most berries
- Fortified breakfast cereals
- Enriched grain products

Thyroid disorders In Pregnancy

Q 1) Which of the following factors put woman at high risk of developing hypothyroidism ?

- The risk factors include family history of thyroid dysfunction
- Previous autoimmune disease
- Thyroid Peroxidase antibody positive

Q 2) What is the role of thyroid hormones in our body in Pregnancy?

- These hormones are necessary to assure healthy fetal development of the brain & nervous system during the first three months of pregnancy.

Q 3) What are the symptoms of hyperthyroidism during pregnancy?

- Heart rate
- Sensitivity to hot temperature
- Fatigue
- Irregular heartbeat
- Severe nausea & vomiting
- Shaking hands (slight tremor)
- Trouble sleeping
- Weight loss or weight gain beyond the expected of typical pregnancy

Q 4) What are the symptoms of hypothyroidism?

- Weight gain
- Constipation
- Difficulty in concentrating memory problems
- Sensitivity to cold temperature
- Muscle cramp

Q 5) What are the causes of thyroid disease in pregnancy?

- The most common cause of maternal hyperthyroidism during pregnancy isautoimmune disorder graves' disease
- Most common cause of hypothyroidism is autoimmune disorder known as
- Hashimoto's thyroiditis.

Q 6) How will you diagnose thyroid disease in pregnancy?

- Hyperthyroidism and hypothyroidism in pregnancy ar diagnosed based on symptoms, physical examination and blood tests to measure level of thyroid stimulating hormones (TSH) and Thyroid hormones T4 & for hyperthyroidism also T3.

Q 7) Treatment of hyperthyroidism as in pregnancy

- For hyperthyroidism – Propylthiouracil (PTU) is given during first trimester & necessary metrimazole can be used after 1st trimester of woman do not respond to there medication or has severe side effects, surgery to remove part of thyroid may be necessary.

Q 8) What is the treatment of hypothyroidism in pregnancy?

- Hypothyroidism is treated with synthetic hormone called levothyroxine, which is similar to hormone T4 made by thyroid monitoring of thyroid functions every 4-6 weeks during pregnancy should be done.

Q 9) How are you doing to monitor the patient of hypothyroidism after delivery?

- After the birth you will need to return to the dose of levothyroxine you were taking before pregnancy.
- You should have blood not to check your thyroid hormones levels after few weeks after the birth.
- The babies have a heel-prick blood test to screen for hypothyroidism.

Q 10) What is postpartum thyroiditis?

- It is a Postpartum thyroiditis, a temporary inflammatory thyroid disorder. It occurs in 5% – 10% pregnancies.
- It is found in women with thyroid autoantibodies.
- Thyroid gland may be little swollen, painless.
- These are symptoms of hyperthyroidism.

Gestational Diabetes Mellitus

Q 1) What is Gestational Diabetes Mellitus?

- It is a form of high blood sugar that occurs only during pregnancy. Gestational Diabetes occurs when the pancreas, the organ that produces insulin cannot make enough insulin to keep the blood sugars normal during pregnancy.

Q2) What are the risk factors for GDM?

- Over weight and obesity
- Lack of physical activity
- Previous gestational diabetes
- Polycystic ovary syndrome
- Diabetes in immediate family member
- Previously delivering a baby weighting more than 4kg

Q 3) How are we going to diagnose GDM?

- The The glucose challenge test, oral glucose tolerance test or RoM test.
- Glucose challenge test the health professional will draw you blood there after you drink sweet liquid containing glucose no fasting is required.
- If blood glucose level is >= 140 mg/dl then OGTT is to be done
- First blood sample is drawn then you need to drink the liquid containing glucose then after 1, 2 hours again blood sample is withdrawn
- 1st hour 180
- 2nd Hour 150
- 3rd Hour 140
- More than 2 values indicates GDM

Q 4) What are the complication of GDM in mother?

- Excessive weight gain
- High blood pressure in mother and preeclampsia
- High chance of Cesarean section
- -High risk of future diabetes
- Preterm labour

Q 5) What ae the complecations of GDM in the fetus?

- Hypoglycemia in fetus
- Jaundice
- Preterm birth
- Breathing problems
- Congenital anomalies in fetus

Q 6) Which type of diat should be used in GDM in pregnancy?

- The diet should be include plenty of whole fruit and vegetables
- Moderate amount of bean proteins and healthy food
- Corn and peas
- The foods containing lot of suger such as soft drinks, fruit juices should be avoided
- The high glycemic index food like poha, potato should be avoided.

Q 7) How to monitor the blood sugar levels in GDM patients?

- The blood glucose monitor (i.e. glucometer) is used to monitor blood sugar levels.
- When the dose of insulin is to be flued that time, the blood glucose levels should be monitored each lunch, pre dinner and post dinner.
- And after fixing the dose of insulin, fast, post lunch and at night the suger levels can be monitered.

Q 8) What are the drugs used in treatment of GDM in pregnancy?

- Oral hypoglycemic agents like glyburide & metformin and insulin can be used.

Q 9) What are the side effect of oral hypoglycemic drugs?

- Feeling dry, drawsy, heart burn, stomach pain, fullness of stomach.

Q 10) What are the preventive measures to be taken to prevent GDM in pregnancy?

- Avoiding junk food, eating bean protein in diet, increasing plenty of vegetables and whole grain in diet.

Liver Disorders in Pregnancy

Q 1) What are the various liver disorders in pregnancy?

- Hyperemesis gravidarum, preeclampsia/eclampsia, Intrahepatic cholestasis of pregnancy, fatty liver of pregnancy

Q 2) What are the various types of primary hepatic disorders seen in pregnancy?

- Viral hepatitis, autoimmune hepatitis, Non-alcoholic fatty liver disease, cirrhosis

Q 3) What are the symptoms of liver disorders in pregnancy?

- Itchy skin, Dark colored urine, Jaundice, Nausea, pain in abdomen, loss of appetite

Q 4) What are the factors that may increase the risk of liver disease?

- Alcohol consumption, obesity, type II diabetes, tattoos, injecting drugs using shared needles

Heart Disease in Pregnancy

Q 1) What are the physiological changes taking in pregnancy in cardiovascular system?

- There is increase in blood volume, increase in cardiac output, higher heart rate, decrease in blood pressure

Q 2) Which is the most common heart disease in pregnancy?

- Mitral stenosis is the most common heart disease in pregnancy

Q 3) What are the symptoms of heart disease?

- Difficulty in breathing, shortness of breathing, palpitations, chest pain, cough at night.

Q 4) What are the various types of congenital heart disease in pregnancy?

- Congenital and acquired heart disease
- In congenital heart disease
- Aortic valve stenosis
- Coarctation of Aorta
- Epstein's anomaly
- PDA
- Pulmonary valve stenosis
- Septal defects
- Tetralogy of fallot

Q 5) What are acquired heart disease?

- It is Rheumatic heart disease cardiomyopathy

Q 6) What are the signs of heart disease in pregnancy?

- Heart murmur, ankle swelling, ECG changes, having open beat, palpable thrills

Q 7) Is there any need for evaluation of fetus in pregnancy?

- If the mother is having congenital heart disease then echo of fetus in antenatal period must be done and in case of acquired heart disease, post delivery baby can be evaluated.

Q 8) How is heart disease managed in pregnancy ?

- Shorten the third stage of labour
- Diuretics in case of heart overload vasodilator
- Watch for signs of failure
- Shortening of breath, ankle edema
- Symptoms of postpartum blues
- Occur in 2-3 days of delivery
- Symptoms peak on 4th – 5th day
- Symptoms resolve within 2 weeks
- Symptoms of depression
- Sense of being overwhelmed, unable to take care of baby, feeling of inadequacy not bonding with baby
- Symptoms of psychosis
- Severe insomnia
- Rapid mood swings
- Anxiety
- Psychomotor restlessness
- Delusion hallucinations

Q 10) What are foetal implication?

- High rate of preterm birth LBW, small head circumference, low APGAR

Mental and psychological problems in pregnancy

Q 1) What are the most common mental health d/o in pregnancy?

- Depression and anxiety are most common mental health problems in pregnancy

Q 2) How common is it?

- 10 – 15 out of every 100 pregnant women experiences it

Q 3) How can mental health be affected by pregnancy?

- Mental d/o during pregnancy and post natal period can have affect mother, foetus as well as whole family

Q 4) When can it happen?

- -Pre-conception, antenatal, postnatal (blues, depression, psychosis)

Q 5) Risk birth factors

- Prior h/o d/o, trauma, pregnancy complications / miscarriage, STD/HIV, extremes of age, social status, substance abuse

Q 6) How do we ask?

- How have you been feeling about yourself
- Have you often been bothered by feeling down, depressed, hopeless?
- During past month, have you often been bothered by having little interest or pleasure in daily activities

Q 7) Most common symptoms

- Mild mood swings, irritability, anxiety, decreased conception, insomnia, tearfulness, crying spell

Q 8) How do we treat?

- If h/o mild / moderate depression, gradual withdrawal of antidepressants switch to psychological therapy
- If severe depressive episodes
- Structured psychological treatment
- Antidepressant treatment
- Combination treatment if no response
- In treatment resistant – consider different single drug or ECT before combination drug treatment

Q 9) OCD in pregnancy

- High risk of onset of OCD during pregnancy / Post partum period
- 39% participants in shady - OCD began during pregnancy
- Treatment normally

UTI in pregnancy

Q 1) What are the adverse perinatal risks aestivated with untreated Bacteriuria?

- Preterm birth, low birth weight, perinatal mortality

Q 2) Why is there an increased risk of pyelonephritis in pregnant women

- Pressure on bladder, uterus immunosuppression

Q 3) Common organism?

- E-coli, Klebsiella, Enterobacter, GBS

Q 4) How to give sample for testing?

- Spread Cabia / midstream urine / clean catch

Q 5) How is it managed?

- Antibiotic therapy depending on culture report

Q 6) How are the women followed up?

- Repeat culture within week after complication of therapy

Q 7) How to prevent UTI?

- Plenty of water to drink / maintain perineal hygiene / avoid touching, wear smooth cloths.

Q 8) What are the symptoms?

- Frequent urination, burning sensation, cloudy or malodourous urine, blood in urine.

Q 9) Symptoms of complicated UTI pyelonephritis?

- Fever, nausea, vomiting, upper back pain, usually on one side

Q 10) Do when you experience such symptoms?

- Consult your doctor immediately
- Maintain perineal hygiene

Q 11) What are the heart disease when you should avoid getting pregnant?

- When you have severe breathlessness at rest
- Severe aortic stenosis
- Severe mitral stenosis
- Eisenmenger syndrome

P/H (Pregnancy Induced Hypertension)

Q 1) Why high BP a problem during pregnancy?

- -Some have high BP before they get pregnant, others develop 1st time during pregnancy. Uncontrolled HP and preeclampsia have effect on mother and futus on pregnancy. Hence it is to be taken seriously.

Q 2) What do the blood pressure number mean?

- A BP reading have 2 no. for e.g. 110/80. 110 – it is the pressure against the artery wall, when the heart contracts i.e. systolic. 80 – is pressure against the artery wall when the heart relax between contraction i.e diastolic.

Q 3) What are the guidelines for BP?

- Normal less than 120/80
- Elevated :- systolic BP between 120 to 129
- Dia > 80mm of Hg
- Stage I – 130-139
- Diastolic – 80-89mm
- State II – systolic at least 140mm
- Diastolic – at least 90mm

Q 4) How often should blood pressure be checked during pregnancy?

- At least in each prenatal case visit

Q 5) What is the effect of hypertension on pregnant woman?

- There is expansion of blood volume during pregnancy.
- If BP goes up during pregnancy it can place extra on her heart and kidneys.
- This can lead to be having as kidney and stroke. It also increase the risk of preeclampsia Preterm birth, placental abruption and C-section.

Q 6) What are the effects of hypertension on fetus?

- It reduce blood flow to placenta on a result may not get enough of nutrients and O2 and needed to grow.

Q 7) What are the symptoms of preeclampsia?

- Swelling on face and hands
- Headache
- Spots and changes in eyesight
- Pain in upper abdomen or shoulder
- Nausea and vomiting in the IInd half of pregnancy.
- Sudden weight gain
- Difficulty in breathing
- Severe features includes :-
- Low no. of platelets in the blood
- Abnormal kidney or liver function
- Pain in upper abdomen
- Changes in vision
- Fluid in the lungs
- Severe headache
- Systolic BP 160mm or higher
- Diastolic BP 110mm or higher

Q 8) How is preeclampsia diagnosed?

- BP increased
- Urine test to proteinuria
- KFT, LFT
- Platelet in blood

Q 9) How is preeclampsia prevented?

- -There is no screening test that can predict which woman will develop preeclampsia during pregnancy. For now prevention involves identifying whether they have risk factors for preeclampsia.

Q 10) Does low dose aspirin prevent preeclampsia?

- Yes – In some

Q 11) What are the management for preeclampsia?

- -Early delivery may be needed in some concern control of HT-preterm babies are at increased risk of breathing, eating problems, stay in warm, hearing and vision problems.

Q 12) ow does preeclampsia affect future health?

- Increased risk of kidney disease heart attack, stroke and high BP also who have preeclampsia once there is a increased risk of developing it again in a future pregnancy.

Rh Isoimmunisation

Q 1) What is Rh isoimmunisation?

- The process by which fetal Rh +ve erythrocytes enter the circulation of a mother, causing her to produce immunoglobulin with antibodies, which can cross the placenta and destroy the erythrocytes of Rh+ve fetus.

Q 2) What are the effects of Rh isoimmunisation in mother?

- Polyhydramnios, preeclampsia, maternal syndrome, generalized oedema , proteinuria, pruritus due to cholestasis
- Post partum hemorrhage.
- DIC

Q 3) What are the fetal complications of Rh isoimmunisation?

- Fetomaternal hemorrhage – hydrops fetalis, stillbirth, icterus gravis neonatorum, neonatal jaundice, complications of neonatal kernicterus, congenital anemia of Newborn.

Q 4) What is Rhesus factor?

- Agglutinogen (C,D,E) – mainly D
- C,D,E – dominant antigen
- C, e – recursive antigen
- Peron lack D antigen called Rh –ve

Q 5) What is icterus gravis neonatarum?

- It less severe form of hemolytic disease
- Baby born alive without jaundice but soon develop within 24 hrs of birth

Q 6) How will you manage a Rh –ve mother with first affected Rh alloimmunizated pregnancy?

- The anti D antibody titers should be considered Rh alloimmuzated.
- These titers are preformed monthly until 24 weeks then repeat every 2 weeks
- If titers remain below critical titer, delivery at term

Q 7) How will you manage a woman with history of previous anemic fetus?

- In subsequent pregnancy, risk is 80%. So, serial amniocentesis for delta OD450 should be started at 18 weeks

Q 8) What are the various diagnostic modalities used in diagnosing Rh alloimmunisation?

- Ultrasonography, Middle cerebral artery Doppler amniocentesis
- If preterm delivery of 36 weeks may be predicted, then antenatal steroids must be given to enhance lungs maturity

Q 9) What is the dose of anti D immunoglobulin?

- 300µg (micrograms)