TRAIN FOR SUCCESS INC.
OBSTETRICS: SOME COMPLICATIONS THAT MAY BE EXPERIENCED DURING PREGNANCY 5 HR

Obstetrics: Some complications that may be experienced during pregnancy 5 Hr

Prepared by Michelle Broomfield RN

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PURPOSE

The purpose of this course is to educate and reinforce the knowledge of nurses; ARNP, CNS, RN, LPN, Licensed Midwifery professionals, CNA /HHA, therapists and other individuals who are working in the health care environment, as well as other Professionals regarding Obstetrics some of the changes and complications some women may experience, what they mean, and which signal that a call needs to be made to the physician. Review changes that occur during the First, second and third Trimester, such as Bleeding, Breast tenderness, Heartburn, nausea, vomiting, constipation, Hemorrhoids, Spider / varicose veins, and some abnormalities that the women may encounter such as Ectopic pregnancy, molar pregnancy (Hydatidiform mole), preeclampsia, gestational diabetes, anemia, an incompetent cervix (a cervical insufficiency), Supine Hypotension (Vena Cava Syndrome), hypertension, Heart disease and pregnancy.

Objectives/ Goals:

After successful completion of this course the Participants will be able to:

1. Describe the changes that occur during the First, second and third Trimester,

2. Describe interventions that will help the women deal with changes that occur during the First, second and third Trimester,

3. Describe complications that may be experienced during pregnancy such as, Ectopic pregnancy, molar pregnancy (Hydatidiform mole), preeclampsia, gestational diabetes, anemia, an incompetent cervix (a cervical insufficiency) and interventions,

5. Discuss complications such as Heart disease and pregnancy, Supine Hypotension (Vena Cava Syndrome), and hypertension.

6. Describe signs and symptoms that could be a sign that something is wrong with the pregnancy and appropriate interventions.

Pregnancy

Pregnancy is also referred to as gestation, it is the time during which one or more embryo or fetus develop inside the woman.

Pregnancy can occur by sexual intercourse or assisted reproductive technology. Pregnancy is different for every woman.
Some women experience good health and vitality during those first three months while others feel miserable and may experience various complications.

Pregnancy is typically divided into three trimesters;

First trimester,

Second trimester,

Third trimester.

FIRST TRIMESTER

Here are some of the changes and complications some women may experience, what they mean, and which signal that a call needs to be made to the physician.

Bleeding

Signs of bleeding during pregnancy is always a concern and should be taken seriously. About 25% of pregnant women experience slight bleeding during their first trimester.

Early in the pregnancy, light spotting may be a sign that the fertilized embryo has implanted in the uterus, update the physician. Also, if there is significant bleeding, cramping, or sharp pain in the abdomen, the physician has to be called.

These could be signs of a miscarriage or ectopic pregnancy (a pregnancy in which the embryo implants outside of the uterus).

Breast tenderness

Breast tenderness or sore breasts are one of the earliest signs of pregnancy. This is usually triggered by hormonal changes, which are preparing the milk ducts to feed the baby, and will probably last throughout the first trimester.

Going up a bra size (or more) and wearing a support bra can make the pregnant woman feel more comfortable.

Constipation

During pregnancy, the muscle contractions that normally move food through the intestines slow down because of higher levels of the hormone progesterone. Also, the extra iron from the prenatal vitamin adds to this, causing constipation and gas that can keep the individual feeling bloated throughout the pregnancy.

Solutions:

- Increase the fiber intake and
- Drink extra fluids will keep things moving more smoothly.
- Physical activity can also be helpful.

If constipation becomes a severe problem, consult with the physician about what mild laxative or stool softeners are safe to use during pregnancy.

Discharge

It is normal to see a thin, milky white discharge (called leukorrhea) early in the pregnancy. The individuals can wear a panty liner if it makes them feel more comfortable, but should not use a tampon because it can introduce germs into the vagina.

If the discharge is foul-smelling, green, or yellow, or if there is a lot of clear discharge, the physician should be consulted.

Fatigue

During pregnancy, the body is working hard to support a growing fetus, which can lead to fatigue. Therefore, the woman becomes worn out more easily than usual. Teach them to take naps or rest when they need to throughout the day. Also make sure there is enough iron intake (too little can lead to anemia, which can cause excess fatigue).

Food cravings and aversions

The taste buds can change during pregnancy. More than 60% of pregnant women experience food cravings, and more than half have food aversions, according to research.

Giving in to cravings from time to time is alright, provided the women are generally eating healthy, low-calorie foods.

The exception is pica (a craving for non-foods items like clay, dirt, and laundry starch), which can be dangerous for the woman and the baby. this needs to be reported to the physician.

Frequent urination

The baby is still very small, but the uterus is growing, and it is putting pressure on the bladder. As a result, the women may feel like they constantly need to go to the bathroom. It is important to encourage the women to continue drinking fluids !!!

The body needs the fluids however, encourage the women to reduce caffeine intake (which stimulates the bladder), especially before bedtime.

Heartburn

During pregnancy, the body produces more of the progesterone hormone which relaxes smooth muscles (the ring of muscle in the lower esophagus that normally keeps food and acids down in the stomach) is affected. This muscle relaxation can lead to acid reflux (heartburn).

To avoid the heartburn, instruct the women to:

- Eat frequent, smaller meals throughout the day;
- Not to lie down right after eating; and
- Avoid greasy, spicy, and acidic foods (like citrus fruits)
- Raise up pillows when sleeping.

Mood swings

Increased fatigue and changing in hormones can cause the women to become emotional (alternately elated, miserable, crying, cranky, terrified). If they are feeling overwhelmed, encourage them to find an understanding ear from the partner, from a friend or family member. Also, time spend doing something that they enjoy, activities, leisure such as watching a movie or going to the mall with friends should be helpful.

Morning sickness

Nausea is one of the most universal pregnancy symptoms, affecting up to 85% of pregnant women. It is the result of hormone changes in the body, and it can last through the entire first trimester.

For some pregnant women, nausea is mild; others cannot spend a day without vomiting. Nausea is usually worst in the morning (morning sickness).

To calm the nausea, instruct the women to:

- Try eating small, bland, or high-protein snacks (crackers, meat, or cheese)
- Sip on water, clear fruit juice (apple juice), or ginger ale (before getting out of bed).
- Avoid any foods that cause sickness to the stomach.

Nausea itself is not anything to worry about, but if it persists or is severe, it can affect the amount of nutrition that is getting to the baby. The baby needs adequate nutrition for normal growth and development to take place.

Weight gain

During the first trimester, the pregnant woman should gain about 3 to 6 pounds. The pregnant woman only need about an extra 150 calories a day during the first trimester.

Patient teaching involves encouraging the women to get those calories the healthy way, by adding:

- Extra fruits and vegetables,
  milk,
  whole-grain bread, and
  lean meat into their diet.

CDC RESOURCE Gestational Weight Gain — United States Click on link for information.

Signs /Symptoms that something is seriously wrong

The following signs/symptoms could be a sign that something is seriously wrong with the pregnancy:

- Severe abdominal pain.
- Significant bleeding.
- Severe dizziness.
- Rapid weight gain or too little weight gain.

Second Trimester of Pregnancy

Within the second trimester of pregnancy, the morning sickness and fatigue should be fading, leaving a feeling of more energy.
The second trimester is often the easiest three months of pregnancy. This is a good time to start planning for the baby's arrival.

During the second trimester, the baby is growing quickly.
Between the 18th and 22nd week of pregnancy the physician will order an ultrasound to assess how the baby is progressing.
At this stage the pregnant woman can learn the sex of the baby.

Changes in the Body

Backache

The extra weight gained in the last few months is starting to put pressure on the back, making it sore and achy. To ease the pressure, instruct the pregnant woman to:

Sit up straight and use a chair that provides good back support.
Sleep in the side lying position with a pillow tucked between the legs.
Avoid picking up or carrying anything heavy.

Wear low-heeled, comfortable shoes with good arch support.

If the pain is uncomfortable, the pregnant women may schedule a pregnancy massage, or their partner can rub the sore spots.

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Bleeding gums

About half of pregnant women develop swollen, tender gums. Hormone changes are sending more blood to the gums, making them more sensitive and causing them to bleed more easily.
The gums should go back to normal after the baby is born.

Patient teaching should include:

¬use a softer toothbrush and be gentle when flossing,
¬Perform regular schedule oral hygiene, Studies show that pregnant women with gum disease (periodontal disease) may be more likely to go into premature labor and deliver a low-birth-weight baby.

Breast enlargement
Much of the breast tenderness the pregnant woman experienced during the first trimester should be wearing off, but the breasts are still growing as they prepare to feed the baby.
Going up a bra size (or more) and wearing a good support bra can assist the women to feel more comfortable.

Congestion and nosebleeds
Hormonal changes cause the mucus membranes lining the nose to swell, which can lead to a stuffy nose and make the pregnant women snore at night.
These changes may also make the nose bleed more easily.

Patient teaching should include:
Before using a decongestant, check with the physician;
¬Saline drops and other natural methods may be safer ways to clear congestion during pregnancy.
¬using a humidifier to keep the air moist.
Teaching regarding how to stop a nosebleed; such as not to tilt the head back and apply pressure to the nostril for a few minutes until the bleeding stops.

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Discharge
It is normal to see a thin, milky white vaginal discharge (called leukorrhea) early in the pregnancy. The women can wear a panty liner to feel more comfortable, but avoid using tampons because it can introduce germs into the vagina.

If the discharge is foul-smelling, green or yellow, bloody, or if there's a lot of clear discharge, call the physician.

Frequent urination
The uterus will rise away from the pelvic cavity during the second trimester, giving the woman a brief break from having to keep going to the bathroom.
The urge to go will come back during the last trimester of the pregnancy.

Hair growth
Pregnancy hormones can boost hair growth
¬Some women will have thicker hair growth on their head.
¬They may also see hair growth on the face, arms, and back.

Shaving or tweezing might be the safest options.
Many experts do not recommend laser hair removal, electrolysis, waxing, or depilatories (a cosmetic preparation used to remove hair from the skin) during pregnancy; because research still has not proven that they are safe for the baby.

Headache
Headaches are one of the most common pregnancy complaints.
Try to get plenty of rest, and practice relaxation techniques, such as deep breathing.
AVOID Aspirin and ibuprofen during pregnancy; Tylenol/ acetaminophen is used.

Heartburn (Pyrosis)
These are caused by the body making more of a hormone called progesterone.
This hormone relaxes certain muscles, including the ring of muscle in the lower esophagus that normally keeps food and acids down in the stomach, and the ones that move digested food through the intestines.

Heartburn is a burning sensation in the epigastric and sternal region.

It results from relaxation of the cardiac sphincter and the decreased tone and mobility of smooth muscles which is due to increased progesterone thereby allowing for esophageal regurgitation, decreased emptying time of the stomach, and reverse peristalsis.

Nursing interventions consist of advising the patient to:
Eat frequent, small meals.
Take sips of milk or hot tea.
Eat slowly.
Avoid fatty and gas-forming foods.

Maintain good posture to give the gastrointestinal tract lots of space.
Do not lie down after eating.
avoid acidic foods (such as citrus fruits).

Constipation

The gastrointestinal tract motility is slowed due to increased progesterone resulting in increased reabsorption of water and drying of stool; and compression of the intestines by the enlarging uterus.

Predisposition to constipation due to oral iron supplement (side effect of iron therapy is constipation). Some patients respond with diarrhea.

Nursing intervention consists of advising the patient to:
Drink at least six glasses of water per day.
Increase roughage in the diet (for example, bran, coarse ground cereals, and fresh fruits and vegetables with skins).
Do moderate exercise every day, especially walking.
Maintain a regular schedule for bowel movements.
Utilize deep breathing and relaxation techniques

Hemorrhoids

Hemorrhoids are actually varicose veins (swollen blue or purple veins) that form around the anus. These veins may enlarge during pregnancy, because extra blood is flowing

through them and there is increased pressure on them from the growing uterus.

Varicose veins can be itchy and uncomfortable.

¬To relieve them, encourage sitting in a warm tub or sitz bath.
¬Remind the pregnant woman not to use any over-the-counter hemorrhoid ointment without first consulting with the physician.

Quickening

By the midpoint of the pregnancy (20 weeks) the pregnant woman will probably have started to feel the first delicate flutters of movement in the abdomen, which is called quickening (the fetal first movements). Some women experience quickening as early as 13-16 weeks, others do not experience quickening until the sixth month of pregnancy.

Skin changes

Pregnant women experience changes in their hormone levels that:

¬Makes the skin on the face appear flushed (look as though they are glowing).
¬An increase in the pigment melanin can also lead to brown marks on the face (often called the mask of pregnancy) and a dark line (linea nigra) down the middle of the abdomen. All of the skin changes should fade after the baby is born.

The skin is also more sensitive to the sun at this time, so teach/instruct the women to wear a broad-spectrum (UVA/UVB protection) sunscreen with an SPF of at least 30 whenever they go outside.

Limit the time in the sun, especially between 10 a.m. and 2 p.m., wearing long-sleeved clothes, pants, a broad-brimmed hat, and sunglasses.

Other skin changes that may be observed include:

¬Thin, reddish-purple lines on the abdomen, breasts, or thighs. These stretch marks emerge as the skin expands to accommodate the growing belly.

Although many creams and lotions claim to prevent or eliminate stretch marks, there is little evidence that they actually do. Using a moisturizer can help soften the skin and reduce itchiness. Most stretch marks should fade on their own after the delivery.

Spider and varicose veins
The circulation has increased to send extra blood to the growing baby.
That excess blood flow can cause tiny red veins, known as spider veins, appear on the skin. These veins should eventually fade once the baby is born.
Pressure on the legs from the growing baby can also slow blood flow to the lower body, causing the veins in the legs to become swollen and blue or purple. These are called varicose veins.

Although there is no way to avoid varicose veins;
¬by getting up and moving throughout the day,
¬ Elevating /propping up the legs on a stool whenever they need to sit for long periods of time, can prevent them from getting worse,
¬by also wearing support hose for extra support.
Varicose veins should improve within three months after the delivery.

Weight gain

Morning sickness usually diminishes by the end of the first trimester.
After that, the appetite should return, and will probably increase. Although food is looking much more appetizing, the pregnant woman needs to be aware of how much they are eating.
The pregnant women only need about an extra 300 to 500 calories a day during the second trimester, and should be gaining about 1/2 to 1 pound a week.

Signs/Symptoms that something is wrong

Any of these symptoms could be a sign that something is wrong with the pregnancy.

Teach the patient not to wait for the prenatal visit to talk about it but to contact the physician/ healthcare practitioner as soon as they experience symptoms such as:
•Severe abdominal pain or cramping,
•Bleeding,
•Severe dizziness,
•Rapid weight gain (more than 6.5 pounds per month) or too little weight gain (less than 10 pounds at 20 weeks into the pregnancy).

Third Trimester of Pregnancy

Backache

The extra weight gain is putting added pressure on the back, making it feel achy and sore. The pregnant women may also feel discomfort in the pelvis and hips as the ligaments loosen to prepare for labor.

To ease the pressure on the back, teach the pregnant woman to;

- Practice good posture.
- Sit up straight and use a chair that provides good back support.
- At night, sleep in the side lying position with a pillow between the legs.
- Wear low-heel, comfortable shoes with good arch support.

To relieve back pain, use a heating pad and
Consult with the physician whether acetaminophen is safe to take.

Bleeding
Spotting may sometimes be a sign of a serious problem, including:
¬placenta previa (the placenta grows low and covers the cervix),
¬placental abruption (separation of the placenta from the uterine wall), or
¬Preterm labor.

The physician should always be contacted when bleeding is observed.

Braxton Hicks contractions;
Some women may start to feel mild contractions,
Braxton Hicks contractions often are not as intense as real labor contractions, but they may feel a lot like labor and can eventually progress to it.
One main difference is that real contractions gradually get closer and closer together and more intense.

CALL THE PHYSICIAN
¬Teach the women that if they feel flushed and out of breath after the contractions, or they are coming regularly, call the physician.

Breast enlargement
By the end of the pregnancy, the breasts will have grown by as much as 2 pounds.
Teach the women to wear supportive bra so that they do not have extreme back ache/ pains.

Close to the due date, some women may start to see a yellowish fluid leaking from the nipples. This substance, called colostrum, will nourish the baby in the first few days after birth.

Discharge

Some women may experience more vaginal discharge during the third trimester.
If the flow is heavy enough to soak through the panty liners, call the physician.
Close to the delivery date, there might be a thick, clear, or slightly blood-tinged discharge. This is the mucus plug, and it is a sign that the cervix has begun dilating in preparation for labor.

A sudden rush of fluid, it may mean the water has broken;
Only about 8% of pregnant women have their water break before contractions begin.
Teach the women that they need to call the physician after the water breaks.

Fatigue

Some women may feel energetic in the second trimester, but are become fatigued after that.
Fatigue may be caused by several factors:
¬Carrying extra weight,
¬waking up several times during the night to go to urinate
¬ dealing with the anxiety of preparing for the baby

The women need to:
¬Eat healthy food and get regular exercise
¬Take a nap when feeling tired, or sit down and relax for a few minutes.

Frequent urination

The baby is much bigger, and the baby's head may be pressing down on the urinary bladder. That extra pressure means the women will have to go to the bathroom more frequently.
Some women may also leak urine when they cough, laugh, sneeze, or exercise.

Teach the women to relieve the pressure and prevent leakage by:
¬Using to the bathroom whenever they feel the urge to urinate.
¬Avoid drinking fluids just before bedtime to cut down on frequent nighttime bathroom use.
¬Wear a panty liner to absorb any leakage that does occur.
¬Call physician if experiencing any pain or burning with urination (may be signs of a urinary tract infection).

Heartburn and constipation

Caused by extra production of progesterone, which relaxes certain muscles including the muscles in the esophagus that normally keep food and acids down in the stomach, and the ones that move digested food through the intestines.
To relieve heartburn, try eating more frequent, smaller meals throughout the day and avoid greasy, spicy, and acidic foods (like citrus fruits).

For constipation,
¬increase fiber intake
¬drink extra fluids to keep things moving.

Hemorrhoids

As mentioned before, hemorrhoids are actually varicose veins (swollen blue or purple veins) that form around the anus.
These veins may enlarge during pregnancy, because extra blood is flowing through them and there is increased pressure on them from the growing uterus.

Varicose veins can be itchy and uncomfortable.
¬To relieve them, encourage sitting in a warm tub or sitz bath.
¬Remind the pregnant woman not to use any over-the-counter hemorrhoid ointment without first consulting with the physician.

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Discomforts Related to the Cardiovascular Systems

Supine Hypotension (Vena Cava Syndrome)
Supine hypotension is caused by pressure of the gravid uterus on the ascending vena cava when the woman is lying in a supine position which decreases the return of the blood flow.

Symptoms may include:
¬nausea,
¬cold /clammy,
¬feels faint,
¬Decreased blood pressure

Nursing interventions consist of instructing the women to:
Rise up /get up slowly
Use the side lying position (left side preferred).

Shortness of breath

As the uterus expands, it rises up until it sits just under the rib cage, leaving less room for the lungs to expand.
That added pressure on the lungs can make it more difficult to breathe.
Exercising can help with shortness of breath. The women can also try propping up their head and shoulders with pillows while they sleep.

Dyspnea
Dyspnea is caused by the limited expansion of the diaphragm by the enlarging uterus. It may be an increased sensitivity to or compensation for slight acidosis.

Dyspnea may be very troublesome in the last weeks of pregnancy. The patient may have difficulty sleeping.

Nursing interventions consist of advising the patient to:
(1) Sleep on additional pillows.

(2) Maintain good posture.
(3) Avoid overeating.
(4) Stop or decrease smoking.
(5) Limit activity before becoming dyspenic.
(6) Decrease anxiety by concentrating on slow, deep breaths.

Dyspnea of sudden onset in patients who are known to have heart disease may be a sign of impending heart failure.
The physician should be notified immediately.

Nasal Stuffiness

Nasal stuffiness is caused by increased vascularization due to the increase in hormone. It is not preventable; functioning of the nasal will return to normal after delivery.

Spider / varicose veins

The circulation has increased to send extra blood to the growing baby.
That excess blood flow can cause tiny red veins, known as spider veins, appear on the skin. These veins should eventually fade once the baby is born.
Pressure on the legs from the growing baby can also slow blood flow to the lower body, causing the veins in the legs to become swollen and blue or purple. These are called varicose veins.

Although there is no way to avoid varicose veins; it may be beneficial to:
¬get up and move throughout the day
¬ prop up the legs on a stool whenever they need to sit for long periods of time, can prevent them from getting worse
¬wear support hose for extra support.
Varicose veins should improve within three months after the delivery.

Swelling
The ankles and face may start to look bloated.
Mild swelling is the result of excess fluid retention called edema.
Rings may feel tighter.

To reduce swelling;
¬Elevate feet up on a stool or box whenever sitting for any length of time,
¬Elevate feet while sleeping.

ALERT!!!
If there is sudden onset of swelling, the women need to seek medical attention immediately because this may be a sign of preeclampsia (will review later) dangerous pregnancy complication.

Backache.
Backache is caused by;

¬relaxation of the sacroiliac joint which is due to increased hormones (steroid sex hormone and relaxation) resulting in slight joint and muscle relaxation and increased mobility; and exaggerated lumbar and cervical thoracic curves caused by changes in the center of gravity from the enlarging abdomen and breasts.

Prevention of strain, which can cause backache, should begin early in pregnancy.

Nursing interventions should include advising patient:

To practice good posture and good body mechanics (use the pelvic tilt and bend at the knees).
To wear appropriate, well-fitting shoes.
To sleep on a firm mattress or backboard.
That backaches may indicate a kidney or bladder infection.
The patient must inform the physician of backache problems. Backaches should be carefully evaluated.

Weight gain

Aim for a weight gain of 1/2 pound to 1 pound a week during the third trimester.
By the end of the pregnancy, weight gain is a total of about 25 to 35 pounds.

The physician may recommend gain of more or less weight if started out the pregnancy underweight or overweight.

The extra pounds are made up of;
¬the baby's weight,
¬the placenta,
¬amniotic fluid,
¬increased blood volume
¬increase in fluid volume,
¬ added breast tissue.

If the baby seems to be too big or too small based on the size of the uterus the physician will do an ultrasound to check the growth.

Symptoms that may suggest something is wrong

Any of these symptoms could be a sign that something is wrong with during pregnancy. Teach the women to call the doctor right away if they experience:
•Severe abdominal pain or cramps
•Severe nausea or vomiting
•Bleeding
•Severe dizziness
•Pain or burning during urination
•Rapid weight gain (more than 6.5 pounds per month) or too little weight gain.

INCOMPETENT CERVICAL OS

An incompetent cervix (a cervical insufficiency), is a condition that occurs when weak cervical tissue causes or contributes to;

- premature birth or the
- loss of an otherwise healthy pregnancy.

Before pregnancy, the cervix (the lower part of the uterus that connects to the vagina) is normally closed and rigid. As pregnancy progresses and the pregnant women prepare to give birth, the cervix;

¬gradually softens,
¬decreases in length (effaces) and
¬opens (dilates).

If the women have an incompetent cervix, the cervix might begin to open too early causing them to give birth too soon.

The cervix is the narrow lower end of the uterus that goes into the vagina.
•In the normal pregnancy, the cervix remains firm, long, and closed until late in the 3rd trimester.
•In the 3rd trimester, the cervix starts to soften, get shorter, and open up (dilate) as the woman's body prepares for labor.

An insufficient cervix may begin to dilate too early in pregnancy. If there is an insufficient

cervix, the following problems are more likely to occur:

Miscarriage in the 2nd trimester:

- Labor begins too early, before 37 weeks

- Bag of waters breaks before 37 weeks

- A premature (early) delivery

No one knows exactly what causes an insufficient cervix, but these things may increase a woman's risk:

•Being pregnant with more than 1 baby (twins, triplets)
•Having an insufficient cervix in an earlier pregnancy
•Having a torn cervix from an earlier birth
•Having past miscarriages by the 4th month
•Having past late-term abortions
•Having a cervix that did not develop normally
•Having a cone biopsy or loop electrosurgical excision procedure (LEEP) on the cervix in the past due to an abnormal Pap smear.

(*LEEP - a thin, low-voltage electrified wire loop is used to cut out abnormal tissue in the cervix*)

An incompetent cervix can be difficult to diagnose and treat.
If the cervix begins to open early, the physician/ health care provider might recommend;

- preventive medication during pregnancy,
- frequent ultrasounds or
- a procedure that closes the cervix with strong sutures (cervical cerclage).

DIAGNOSIS

An incompetent cervix is usually detected during pregnancy, and even then, diagnosis can be difficult especially during a first pregnancy.

To help diagnose an incompetent cervix, the health care provider will;

- Document any symptoms the woman is experiencing;

¬ask about the women medical history; such as pregnancy loss or history of cervical tear during a previous labor and delivery.

The physician/ health care provider might determine an incompetent cervix if there is:

A history of painless cervical dilation,
second trimester deliveries,
A history of short labors,
Earlier deliveries in previous pregnancies

And advanced cervical dilation and effacement before week 24 of pregnancy;

¬without painful contractions,
¬without vaginal bleeding,
¬without water breaking (ruptured membranes) or
¬without infection

Tests and procedures to help diagnose an incompetent cervix during the second trimester include:

Transvaginal ultrasound
If the fetal membranes are not in the vagina or cervical canal the health care provider will use transvaginal ultrasound to;

¬evaluate the length of the cervix,
¬determine how much the cervix has dilated and

¬examine the fetal membranes.

During this type of ultrasound, a slender transducer is placed in the vagina to send out sound waves and gather the reflections of the cervix and lower uterus on a monitor.

Pelvic exam
The health care provider will;

¬Examine the cervix to see if the amniotic sac has begun to protrude through the opening -prolapsed fetal membranes.

If the fetal membranes are in the vagina or cervical canal – there is an incompetent cervix.

The health care provider will check for evidence of any congenital conditions or cervical tears that might cause an incompetent cervix.
The health care provider will also check for contractions and, if necessary, monitor them.

Laboratory tests

If the fetal membranes are visible and an ultrasound shows signs of inflammation, but the woman does not have symptoms of an infection;

the health care provider might test a sample of amniotic fluid – amniocentesis, to diagnose or rule out an infection of the amniotic sac and fluid (chorioamnionitis).

Some tests can be done before pregnancy to help detect uterine abnormalities that might cause an incompetent cervix. For example, the Physician /health care provider might suggest an;

ultrasound or magnetic resonance imaging (MRI) ; a procedure that uses a magnetic

field and radio waves to create detailed images of the organs and tissues within the body.

In some cases, hysterosalpingography, a procedure that uses X-rays to examine the inside of the uterus, fallopian tubes and surrounding area, is recommended.

TREATMENT
Progesterone supplementation.

If there is a history of premature birth, the health care provider might recommend;

Weekly injections of a form of the hormone progesterone called hydroxyprogesterone caproate (Makena) during the second trimester. However, further research is needed to determine the best use of progesterone in cervical insufficiency. Currently, progesterone treatments do not seem to be helpful for pregnancy with twins or more.

Makena is injected into a muscle (IM) ONCE PER WK.

CAUTION!!

Should not use Makena if;
¬Allergic to hydroxyprogesterone or castor oil, or
¬if there is unusual vaginal bleeding,
¬liver disease or liver cancer,
¬breast cancer,
¬uterine cancer,
¬uncontrolled high blood pressure,
¬a history of jaundice caused by pregnancy, or
¬a history of stroke,
¬blood clot, or circulation problems.

Serial ultrasounds

If there is a history of early premature birth, or previous cervical damage in earlier deliveries or operations, the health care provider might begin;

careful monitoring of the length of the cervix by completing ultrasounds every two weeks from week 15 through week 24 of pregnancy. If the cervix begins to open or becomes shorter than a certain length, the health care provider might recommend cervical cerclage.

Cervical cerclage

If less than 24 weeks pregnant or have a history of early premature birth and an ultrasound shows that the cervix is opening, a surgical procedure known as cervical cerclage might help prevent premature birth;

¬During the procedure, the cervix is stitched closed with strong sutures.

¬The sutures will be removed during the last month of pregnancy or during labor.

If there is a have a history of premature births that is likely due to cervical insufficiency, the health care provider might also recommend cervical cerclage before the cervix begins to open- prophylactic cerclage.
This procedure is typically done before week 14 of pregnancy.
Cervical cerclage is not appropriate for everyone at risk of premature birth.
The procedure is not recommended for women carrying twins or more.

Pessary

The health care provider might also recommend the use of a pessary.
A Pessary- device that fits inside the vagina and is designed to hold the uterus in place.
A pessary can be used to help lessen pressure on the cervix.
However, further research is needed to determine if a pessary is an effective treatment for cervical insufficiency.

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OBSTETRICS: SOME COMPLICATIONS THAT MAY BE EXPERIENCED DURING PREGNANCY 5 HR

Risk factors for a high-risk pregnancy

¬A high-risk pregnancy is sometimes the result of a medical condition present before pregnancy.

¬In other cases, a medical condition that develops during pregnancy for either mom or baby causes a pregnancy to become high risk.

Specific factors that might contribute to a high-risk pregnancy include:

Advanced maternal age
Pregnancy risks are higher for mothers age 35 and older.
Lifestyle choices
Smoking cigarettes, drinking alcohol and using illegal drugs can put a pregnancy at risk.
Medical history
A prior C-section, low birth weight baby or preterm birth; birth before 37 weeks of pregnancy, might increase the risk in subsequent pregnancies.

Other risk factors include;

¬a family history of genetic conditions,
¬a history of pregnancy loss or
¬the death of a baby shortly after birth.

Underlying conditions
Chronic conditions for examples;

¬diabetes,
¬high blood pressure
¬epilepsy increase pregnancy risks.
¬a blood condition, for example anemia,
¬ an infection
¬an underlying mental health condition also can increase pregnancy risks.

Other possible complications

Various complications that develop during pregnancy increases risks, for example;

¬problems with the uterus,
¬problems with the cervix or
¬problems with the placenta.

Other concerns might include;
¬too much amniotic fluid - polyhydramnios or
¬low amniotic fluid (oligohydramnios),
¬restricted fetal growth, or
¬Rh (rhesus) sensitization ; a potentially serious condition that can occur when the women blood group is Rh negative and the baby's blood group is Rh positive.

Multiple pregnancy
Pregnancy risks are higher for women;
¬carrying twins or higher order multiples.

Special tests
High-risk pregnancy, may consider various tests or procedures in addition to routine prenatal screening tests. Depending on the circumstances, the health care provider might recommend:
Specialized or targeted ultrasound

This type of fetal ultrasound; an imaging technique that uses high-frequency sound waves to produce images of the baby in the uterus.

¬The ultrasound targets a suspected problem, for example abnormal development.

Amniocentesis

During the procedure, a sample of the fluid that surrounds and protects the baby during pregnancy (amniotic fluid) is withdrawn from the uterus.
Typically done after week 15 of pregnancy.

Amniocentesis can identify;
¬certain genetic conditions,
¬neural tube defects; serious abnormalities of the brain or spinal cord.

Information obtained by amniocentesis

Color of fluid
The fluid is usually colorless.
If it is meconium (stool) stained, it will be greenish brown and this indicates fetal hypoxia.

- Detects fetal chromosomal anomalies such as Down's Syndrome.
- Helps evaluate probability of sex-linked genetic disorders.

- Indicates fetal maturity,
- Indicates in-born errors, or metabolism,
- Indicates disorders like PKU.

Risks of the procedure
Overall complications are less than 1% for the mother and the fetus.

Possible risks are:
Maternal;
- Hemorrhage.
- Infection.
- Labor.
- Inadvertent damage to the intestines or bladder.

Fetal, Possible risks are:
Death.
Hemorrhage.
Direct injury from the needle.
Abortion.
Premature labor.

Chorionic villus sampling (CVS)

During this procedure;
¬a sample of cells is removed from the placenta.

¬Typically done between weeks 10 and 12 of pregnancy, CVS can identify certain genetic conditions.

Cordocentesis (Percutaneous umbilical blood sampling).

This test, also known as Percutaneous umbilical blood sampling (Cordocentesis), is a highly specialized prenatal test in which a fetal blood sample is removed from the umbilical cord.

Typically done after week 18 of pregnancy, the test can identify;
¬chromosomal conditions,

¬blood disorders and

¬infections.

Non-Stress Test

It evaluates the ability of the placenta to supply fetal needs in a normal (or unstressed) daily uterine environment.

The non-stress test (NST) involves;

Application of the fetal monitor to record the fetal heart rate.
The mother is instructed to push a marker button when she feels the fetus move.
The marker button indicates movement as it occurred in relationship to the fetal heart rate.

With sufficient placental functioning, the fetus should demonstrate an acceleration in heart rate with movement, in the same way that the adult

experiences increased heart rate with exercises.

A lack of fetal heart rate acceleration indicates the need for further testing.

Non-stress test is used to screen the high-risk pregnancy where the placental compromise is anticipated to include;
- post-term pregnancy,
- pregnancy induced hypertension,
- gestational diabetes,
- intrauterine growth retardation, and
-maternal complaints of decreased fetal movement.

Patients identified as Non-stress test (NST) candidates will generally be required to complete a Non-stress test on a regular basis (weekly, bi-weekly).

Methods of Contraction Production

Oxytocin challenge test (OCT)

An intravenous (I.V.) solution of oxytocin is administered to the mother until a contraction pattern is developed. When sufficient information is obtained to evaluate the test, the medication is turned off.

The Oxytocin challenge test evaluates the ability of the placenta to supply fetal needs in a stressed environment. Contractions /Labor are a stress on the pregnancy.

During a contraction, the flow of oxygen from the uterus to the placenta is diminished.

The healthy placenta stores an oxygen reserve so that the fetus does not suffer a diminished supply of oxygen during the contraction.

The Oxytocin challenge test involves application of the fetal monitor to record fetal heart rate and contraction activity. Acceptable results include acceleration of fetal heart rate or no change in fetal heart rate baseline during a contraction.

Unacceptable results include deceleration of fetal heart rate during a contraction.

The Oxytocin challenge test is used to evaluate the high-risk pregnancy where the placental compromise is suspected. It is often applied to the high-risk patients.

In addition the Oxytocin challenge test is used to evaluate the patient when a suspicious result is obtained on an Non-stress test. The Oxytocin challenge test is more invasive than the Non-stress test; it provides more conclusive results than the Non-stress test.

Breast stimulation test (BST)

This test involves stimulation of the nipples (by rubbing), which causes the posterior pituitary to release the hormone oxytocin, which in turn, causes contractions.

Contraction stress test (CST)

Evaluation is done in the presence of naturally occurring contractions. Helps in evaluating the respiratory function (oxygen and carbon dioxide

exchange) in the placenta.

Cervical length measurement
The health care provider might use;
¬an ultrasound to measure the length of the cervix at prenatal appointments to determine if the woman is at risk of preterm labor.

Laboratory tests

Fetal fibronectin
The health care provider might take a swab of the vaginal secretions to check for fetal fibronectin (a substance that acts like a glue between the fetal sac and the lining of the uterus).

The presence of fetal fibronectin might be a sign of preterm labor.

Biophysical profile
This prenatal test is used to check on a baby's well-being.

The test combines ;
¬fetal heart rate monitoring (nonstress test) and
¬fetal ultrasound.

Some prenatal diagnostic tests carry a small risk of pregnancy loss such as;
¬amniocentesis and
¬chorionic villus sampling

Specific signs or symptoms to look out for include;
¬Vaginal bleeding

¬Persistent headaches

¬Pain or cramping in the lower abdomen

¬Watery vaginal discharge (in a gush or a trickle)

¬Regular or frequent contractions (a tightening sensation in the abdomen)

¬Decreased fetal activity

¬Pain or burning with urination

¬Changes in vision, including blurred vision

PREECLAMPSIA

Preeclampsia is a pregnancy complication characterized by high blood pressure and signs of damage to another organ system, often the kidneys.

Preeclampsia usually begins after 20 weeks of pregnancy in a woman whose blood pressure had been normal. Even a slight rise in blood pressure may be a sign of preeclampsia.

Left untreated;
¬preeclampsia can lead to serious (even fatal) complications for both the women and baby.
If the woman has preeclampsia, the only cure is delivery of the baby.

With diagnosis of preeclampsia too early in the pregnancy to deliver the baby,

the baby needs more time to mature; the physician may order some treatment such as medication to lower the blood pressure.

SYMPTOMS

Preeclampsia sometimes develops without any symptoms.
High blood pressure may develop slowly, but more commonly it has a sudden onset.
Monitoring the blood pressure is an important part of prenatal care because the first sign of preeclampsia is commonly a rise in blood pressure.

¬Blood pressure that is 140/90 mm Hg or greater which is documented on two occasions, at least four hours apart and is abnormal.

Other signs and symptoms of preeclampsia may include:

•Excess protein in the urine (proteinuria) or additional signs of kidney problems
•Severe headaches
•Changes in vision, including temporary loss of vision, blurred vision or light sensitivity
•Upper abdominal pain, (usually under the ribs on the right side)
•Nausea or vomiting
•Decreased urine output
•Decreased levels of platelets in the blood (thrombocytopenia)
•Impaired liver function
•Shortness of breath, caused by fluid in the lungs

¬Sudden weight gain and edema (swelling)

Particularly in the face and hands often accompanies preeclampsia. But these things also occur in many normal pregnancies.

CAUSE

The exact cause of preeclampsia is unknown.
Experts believe it begins in the placenta (the organ that nourishes the fetus throughout pregnancy). Early in pregnancy, new blood vessels develop and evolve to efficiently send blood to the placenta.

In women with preeclampsia, these blood vessels do not seem to develop properly.
They are narrower than normal blood vessels and react differently to hormonal signaling, which limits the amount of blood that can flow through them.

Causes of this abnormal development may include:

•Insufficient blood flow to the uterus
•Damage to the blood vessels
•A problem with the immune system
•Certain genes

Other high blood pressure disorders during pregnancy

Preeclampsia is classified as one of four high blood pressure disorders that can occur during pregnancy.

The other three are:

Gestational hypertension
Women with gestational hypertension have high blood pressure but no

excess protein in the urine or other signs of organ damage.
Some women with gestational hypertension eventually develop preeclampsia.

Chronic hypertension

Chronic hypertension is high blood pressure that was present before pregnancy or that occurs before 20 weeks of pregnancy. But because high blood pressure usually does not have symptoms, it may be hard to determine when it began.

Chronic hypertension with superimposed preeclampsia
This condition occurs in women who have chronic high blood pressure before pregnancy who then develop worsening high blood pressure and protein in the urine or other health complications during pregnancy.

Preeclampsia develops only as a complication of pregnancy.

Risk factors include:

History of preeclampsia
A personal or family history of preeclampsia significantly raises the women risk of preeclampsia.
First pregnancy - (risk of developing preeclampsia is highest during the first pregnancy).
New paternity - Each pregnancy with a new partner increases the risk of preeclampsia over a second or third pregnancy with the same partner.
Age - The risk of preeclampsia is higher for pregnant women older than 40.
Obesity - The risk of preeclampsia is higher if the woman is obese.
Multiple pregnancy - Preeclampsia is more common in women who are carrying twins, triplets or other multiples.
Interval between pregnancies - Having babies less than two years, or more than 10 years apart leads to a higher risk of preeclampsia.

History of certain conditions - Having certain conditions before becoming pregnant increases the risk of preeclampsia for example;
¬chronic high blood pressure,

¬migraine headaches,
¬ type 1 or type 2 diabetes,
¬ kidney disease,
¬a tendency to develop blood clots,
¬lupus

COMPLICATIONS

The more severe the preeclampsia and the earlier it occurs in the pregnancy, the greater the risks for the women and the baby.

Preeclampsia may require induced labor and delivery.
Surgical delivery (cesarean section or C-section) may be done if other problems are present, such as a baby in breech presentation, or if a speedy delivery is necessary.

If there is severe preeclampsia or at less than 30 weeks gestation, a C-section may be necessary.

Complications of preeclampsia may include:

Lack of blood flow to the placenta
Preeclampsia affects the arteries carrying blood to the placenta.

If the placenta does not get enough blood, the baby may receive less oxygen and fewer nutrients;

This can lead to;
¬slow growth,
¬low birth weight or
¬preterm birth.

Prematurity can lead to breathing problems for the baby.

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Placental abruption

Preeclampsia increases the risk of placental abruption, in which the placenta separates from the inner wall of the uterus before delivery.

Severe abruption can cause heavy bleeding and damage to the placenta, which can be life-threatening for both the woman and the baby.

HELLP syndrome

H = hemolysis
E = elevated
L - liver enzymes
L = low
P = platelet count

HELLP stands for hemolysis (the destruction of red blood cells), elevated liver enzymes and low platelet count.

HELLP syndrome can rapidly become life-threatening for both the woman and the baby.

Symptoms of HELLP syndrome include:
¬nausea and vomiting,
¬headache, and
¬upper right abdominal pain.

HELLP syndrome is particularly dangerous because it represents damage to several organ systems. Sometimes it may develop suddenly, even before high blood pressure is detected.

Eclampsia

When preeclampsia is not controlled, eclampsia can develop.
Eclampsia is preeclampsia with seizures.

Symptoms that suggest imminent eclampsia include;
- upper right abdominal pain,
- severe headache,
- vision problems and
- change in mental status, such as decreased alertness.

Because eclampsia can have serious consequences for both the woman and the baby, delivery becomes necessary, regardless of how far along the pregnancy is.

Cardiovascular disease
Having preeclampsia may increase the risk of future heart and blood vessel - cardiovascular disease.

The risk is even greater if the women had preeclampsia more than once or if they had a preterm delivery.

To minimize this risk, after delivery the women should;

¬maintain an ideal weight,
¬Eat a variety of fruits and vegetables,
¬Exercise regularly,
¬Avoid smoking.

DIAGNOSIS

To diagnose preeclampsia, there has to be high blood pressure and one or more of the following complications after the 20th week of pregnancy:

•Protein in the urine (proteinuria)
•A low platelet count

•Impaired liver function
•Signs of kidney trouble other than protein in the urine
•Fluid in the lungs (pulmonary edema)
•New-onset headaches
•Visual disturbances

Previously, preeclampsia was only diagnosed if a pregnant woman had high blood pressure and protein in her urine. However, experts now know that it is possible to have preeclampsia, and never have protein in the urine.

A blood pressure reading in excess of 140/90 mm Hg is abnormal in pregnancy (a single high blood pressure reading does not mean preeclampsia).

If there is one BP reading in the abnormal range, then a having a second abnormal blood pressure reading four hours after the first may confirm preeclampsia.

Additional blood pressure readings and blood and urine tests may also be done.

Tests that may be needed
Suspects preeclampsia, other tests, may include:

Blood tests
Blood test to determine how well the liver and kidneys are functioning and whether there are normal amount of platelets (cells that help blood clot).

Urine analysis
A urine sample that measures the ratio of protein to creatinine.
Urine samples taken over 24 hours can quantify how much protein is being lost in the urine, an indication of the severity of preeclampsia.

Fetal ultrasound
Close monitoring of the baby's growth through ultrasound.
The images of the baby created during the ultrasound exam allow the physician to;
¬Estimate fetal weight and
¬Estimate the amount of fluid in the uterus (amniotic fluid).

Nonstress test or biophysical profile
A nonstress test is a simple procedure that checks how the baby's heart rate reacts when the baby moves.

A biophysical profile combines an ultrasound with a nonstress test to provide more information about;
¬the baby's breathing,
¬the baby's tone,
¬the baby's movement and
¬the volume of amniotic fluid in the uterus.

TREATMENT
¬The only cure for preeclampsia is delivery.

¬The pregnant women with preeclampsia, is at increased risk of ;
- seizures,
- placental abruption,
- stroke and
- possibly severe bleeding until the blood pressure decreases.

If it is too early in the pregnancy, delivery may not be the best thing for the baby.

With a diagnosis of preeclampsia, the physician will schedule more frequent prenatal visits, more frequently than what is typically recommended for pregnancy.

Also may order more blood tests, ultrasounds and nonstress tests than would be expected in an uncomplicated pregnancy.

Medications

Possible treatment for preeclampsia may include:

Medications to lower blood pressure
Antihypertensives are used to lower the blood pressure if it is dangerously high.

Blood pressure in the 140/90 millimeters of mercury (mm Hg) range generally is not treated.

Although there are many different types of antihypertensive medications, a number of them are not safe to use during pregnancy.

Corticosteroids

If there is severe preeclampsia or HELLP syndrome, corticosteroid medications can temporarily improve liver and platelet function to help prolong the pregnancy.

Corticosteroids can also help the baby's lungs become more mature (in 48 hours) an important step in preparing a premature baby for life outside the womb.

Anticonvulsant medications

If the preeclampsia is severe, the physician may order an anticonvulsant medication, such as magnesium sulfate, to prevent a first seizure.

Bed rest

Bed rest used to be routinely recommended for women with preeclampsia.
But research has not shown a benefit from this practice, and it can increase the risk of blood clots. For most women, bed rest is no longer recommended.

Hospitalization

Severe preeclampsia may require that the women be hospitalized.
In the hospital, the physician may perform regular nonstress tests or biophysical profiles to monitor the baby's well-being and measure the volume of amniotic fluid.

A lack of amniotic fluid is a sign of poor blood supply to the baby.

Delivery

If diagnosed with preeclampsia near the end of the pregnancy, the physician may recommend inducing labor right away.

The readiness of the cervix (if beginning to open/dilate, thin (efface) and soften/ripen)

also may be a factor in determining whether or when labor will be induced.

In severe cases, it may not be possible to consider the baby's gestational age or the readiness of the cervix. If it is not possible to wait, the physician may induce labor or schedule a C-section right away.

During delivery, the women may be given magnesium sulfate intravenously to prevent seizures.

After delivery, expect the blood pressure should return to normal (within 12 weeks but usually much earlier).

Pain-relieving medication after delivery;

Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen (Advil, Motrin etc.) and naproxen sodium (Aleve), can increase the blood pressure.

Acetaminophen (Tylenol) is usually a safer alternative.

HYDRATIDIFORM MOLE

Hydatidiform mole is a rare mass or growth that forms inside the uterus at the beginning of a pregnancy. It is a type of gestational trophoblastic disease (GTD).

Causes

Hydatidiform mole, or molar pregnancy, results from too much production of the tissue that is supposed to develop into the placenta. The placenta feeds the fetus during pregnancy.
With a molar pregnancy, the tissues develop into an abnormal growth, called a mass.

There are 2 types of these masses:
•Partial molar pregnancy. There is an abnormal placenta and some fetal development.
•Complete molar pregnancy. There is an abnormal placenta and no fetus.

Both forms are due to problems during fertilization. The exact cause of fertilization problems is unknown. There are no known ways to prevent these masses from forming.

Symptoms
Symptoms of a molar pregnancy are:

•Abnormal growth of the uterus, either bigger or smaller than usual
•Nausea and vomiting that may be severe enough to require a hospital stay
•Vaginal bleeding during the first 3 months of pregnancy
•Symptoms of hyperthyroidism, including heat intolerance, loose stools, rapid heart rate, restlessness or nervousness, warm and moist skin, trembling hands, or unexplained weight loss
•Symptoms similar to preeclampsia that occur in the first trimester or early second trimester, including high blood pressure and swelling in the feet, ankles, and legs (this is almost always a sign of a hydatidiform mole, because preeclampsia is extremely rare this early in a normal pregnancy)

Examinations
A pelvic exam may show signs similar to a normal pregnancy.
But the size of the womb may be abnormal and there may be no heart sounds from the baby. There may be some vaginal bleeding.

A pregnancy ultrasound will show an abnormal placenta, with or without some development of a baby.

Tests may include:

•hCG (quantitative levels) blood test
•Chest x-ray
•CT or MRI of the abdomen (imaging tests)
•Complete blood count (CBC)
•Blood clotting tests
•Kidney and liver function tests

Treatment
If the health care provider suspects a molar pregnancy, a dilation and curettage (D & C) will most likely be recommended.

Sometimes a partial molar pregnancy can continue.
A woman may choose to continue the pregnancy in the hope of having a successful birth and delivery. However, these are very high-risk pregnancies.

Risks include;
- bleeding,
- problems with blood pressure, and
- Problems with premature delivery (having the baby before it is fully developed).
- the condition may become worse.

A hysterectomy; surgery to remove the uterus, may be an option for older women who do not wish to become pregnant in the future.

After treatment, the hCG level will be monitored.

It is important to avoid another pregnancy and to use a reliable contraceptive for 6 to 12 months after treatment for a molar pregnancy.

This time allows for accurate testing to be sure that the abnormal tissue does not grow back. Women who get pregnant too soon after a molar pregnancy are at high risk of having another molar pregnancy.

Most hydatidiform moles are noncancerous (benign).
Treatment is usually successful.

Close follow-up by the health care provider is important to ensure that signs of the molar pregnancy are gone and pregnancy hormone levels return to normal.

Sometimes hydatidiform moles can continue and start changing into cancer.
These moles can grow deep into the uterine wall and cause bleeding or other complications. Rarely, a hydatidiform mole develops in choriocarcinoma .
This is a fast-growing cancer. It is usually treated with chemotherapy, and can be life-threatening.

Possible Complications

Complications of molar pregnancy may include:
•Change to invasive molar disease or choriocarcinoma
•Preeclampsia
•Thyroid problems
•Molar pregnancy that continues or comes back

Complications from surgery to remove a molar pregnancy include:
•Excessive bleeding, possibly requiring a blood transfusion
•Side effects of anesthesia

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Heart conditions and pregnancy

When the pregnant women have a heart condition, they will need special attention/care during pregnancy.
¬Pregnancy stresses the heart and circulatory system.

¬During pregnancy, the blood volume increases by 30 to 50 % to nourish the growing fetus.

¬The amount of blood that is pumped by the heart every minute also increases by 30 to 50 %.

¬The heart rate also increases.

These changes cause the heart to work harder.

Labor and delivery also add to the heart's workload.

During labor;
¬When the woman has to push during labor she also experiences abrupt changes in blood flow and pressure.

¬When the baby is born, there is reduced blood flow through the uterus that also stresses the heart.

The risks
The risks depend on the nature and the severity of the underlying heart status/ condition for example:

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Heart rhythm issues
¬Some minor abnormalities in heart rhythm are common during pregnancy. They are not usually cause for worry/ concern.

Heart valve issues
If there is an artificial heart valve or the heart or valves are malformed or scarred, there might be an increased risk of complications during the pregnancy.
¬If the valves are not working well, there may be trouble tolerating the increased amount of blood flow.

¬Also the artificial or abnormal valves may cause an increased risk of endocarditis (a potentially life threatening infection of the lining of the heart and heart valves).

¬Mechanical artificial heart valve poses serious risks during pregnancy because there is a need to adjust use of blood thinners and the potential for life-threatening clotting/thrombosis of the heart valves.

Congestive heart failure
¬As the blood volume increases, congestive heart failure may get worse.

Congenital heart defect
¬If the woman was born with a heart problem, the baby has a greater risk of developing some type of heart defect, too.

¬The woman may also be at risk of premature birth.

There are four valves in the heart including the:

¬Mitral,
¬Tricuspid,
¬Aortic and
¬Pulmonic valves.

The aortic valve is located between the left ventricle (lower heart pumping chamber) and the aorta, which is the largest artery within the body.
The valves maintain one way blood flow through the heart.

Some heart conditions, such as problems with the;
¬mitral valve or aortic valve, can cause life-threatening risks for the mother and /or the baby.

Depending on the circumstances, some heart conditions may require major treatments for example heart surgery, before the women try to get pregnant.

Eisenmenger's syndrome

The risk of pregnancy in women with Eisenmenger's syndrome is so high that pregnancy is not recommended.

High blood pressure affects the arteries in the lungs and the right side of the heart (pulmonary hypertension). Individuals with Eisenmenger's syndrome are often born with a hole between the two pumping chambers (the left and right ventricles) of the heart - ventricular septal defect. The hole allows the blood that has already picked up oxygen from the lungs to flow back into the lungs, instead of going out to the rest of the body.

Other heart defects that can lead to Eisenmenger syndrome include:

¬Atrioventricular canal defect
¬Atrial septal defect
¬Cyanotic heart disease
¬Patent ductus arteriosus
¬Truncus arteriosus

¬Over many years, increased blood flow can damage the small blood vessels in the lungs. This causes high blood pressure in the lungs.
¬As a result, the blood backs up and does not go to the lungs to pick up oxygen. Instead, the blood goes from the right side to the left side of the heart, causing oxygen-poor blood to travel to the rest of the body.

Symptoms
•Bluish lips, fingers, toes, and skin (cyanosis)
•Chest pain
•Coughing up blood
•Dizziness
•Fainting
•Feeling tired
•Shortness of breath
•Stroke
•Swelling in the joints caused by too much uric acid (gout).

Preparing for pregnancy

¬Appointment with the cardiologist and the health care provider is vital, even before pregnancy.

¬Some medications commonly used to treat heart conditions are not used during pregnancy.

¬Depending on the circumstances, the health care provider might adjust the dosage or make a substitution and explain the risks involved.

Prenatal visits for women with Heart Condition
¬During the pregnancy, there will be frequent appointments with health care provider often.

¬The weight and blood pressure will be checked at every visit,

¬Frequent blood and urine tests will be completed.

The health care provider may use various tests to evaluate the heart function, such as:

Echocardiogram

This test uses sound waves to produce images of the heart.

Electrocardiogram

This test records the heart's electrical activity.

Close monitoring of the baby
The health care provider will closely monitor the baby's development throughout the pregnancy. Routine ultrasound exams can be used to track the baby's growth, and specialized ultrasounds can be used to detect any fetal heart abnormalities.

The baby may also need monitoring or treatment after delivery.

Teach the women steps to take to prevent complications
Teach the women to take good care of themselves is the best way to take care of the baby.

For example:
Keep prenatal appointments

¬Visit the health care provider regularly throughout the pregnancy.
Take medications as prescribed
¬The physician will prescribe the safest medication at the most appropriate dose.

REST

¬Take daily naps,
¬Avoid strenuous physical activities.
¬Bed rest is sometimes recommended.

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Monitor weight

¬Gaining the appropriate amount of weight will support the baby's growth and development, but if there is too much weight gain, it will place additional stress on the heart.

Manage anxiety

¬Teach patients what to expect during labor and delivery.

¬Knowing what is happening can help the women feel more relaxed.

Know what to avoid;

¬Avoid smoking,

¬Avoid alcohol

¬Avoid illegal drugs.

Signs or symptoms to report to the physician

Contact the physician/ health care provider for any abnormal signs or symptoms such as:

•Difficulty with breathing
•Shortness of breath on exertion
•Heart palpitations,
•Rapid heart rate
•Irregular pulse
•Chest pain
•Cough with blood

Labor and delivery

¬The physician may recommend delivering the baby at a medical center that specializes in high-risk pregnancies.

¬Labor may be induced if there are concerns about the heart or circulation

¬Certain specialists may be present during labor

¬Specialized equipment might be used to monitor the woman and baby during labor.

If the heart condition places the woman at high risk, a catheter might be inserted into a vein or artery to provide detailed information about the heart function and blood pressure.
The contractions and the baby's heart rate will continuously be monitored.
Side lying position
Instead of lying flat on the back, the woman might be asked to lie on the side and draw one of the knees toward the chest.

To reduce stress on the respiratory system,
¬Epidural anesthesia may be prescribed for pain relief.

If a vaginal delivery, the health care provider
¬might limit the amount of time the woman should push.

The baby may be delivered with the help of forceps or a vacuum extractor.
If the woman is at risk of endocarditis,

¬she might receive antibiotic treatment just before and after delivery.

Breast Feeding

Breast feeding is encouraged for most women who have heart conditions,
even those who take medication. Sometimes alternative medication is recommended.

If the woman has a congenital heart problem that greatly increases the risk of endocarditis, the physician will discuss the risk of mastitis while breast-feeding.

Mastitis

Mastitis is a breast inflammation usually caused by infection.
Going for long periods between nursing and/ or not emptying the breast completely can also contribute to mastitis.

Using different breast feeding techniques and making sure the baby is latched on properly when nursing will help with emptying the breast and avoiding cracked nipples.

Mastitis can be painful; it is usually easily cleared up with medication.
Mastitis often starts as a painful area in one breast. It may be red or warm to the touch, or both.

There might also be;
¬fever,
¬ chills, and
¬body aches.

Treatment

¬Antibiotics as ordered by the physician,
¬Take acetaminophen/ Tylenol for pain or a fever,
¬Get more rest,
¬Drink more fluids,
¬Use warm or cold packs on the painful breast
¬Before breast feeding the baby, place a warm, wet washcloth over the affected breast for about 15 minutes (at least 3 times a day). This will increase milk flow in the breast. Also massaging the affected breast may increase milk flow.

Pumping and feeding breast milk might be recommended in some circumstances.

Pregnancy and diabetes

CDC RESOURCE - Gestational Diabetes Mellitus in the United States – CLICK ON LINK for more information.

There are many risks to having diabetes during pregnancy. Complications are more likely when the blood sugar is not well controlled. With good control, most pregnancies have good outcomes. Therefore, dietary management will be the priority of the treatment plan.

Pregnant women with gestational diabetes tend to have larger babies at birth. This can increase the chance of problems at the time of delivery.

Possible problem that may be encountered include birth injury because of the baby's large size.

The goals include:

¬Tight blood sugar control.
When the woman has diabetes (type 1 or type 2) pregnancy will present challenges.
¬Complications are more likely when the blood sugar is not well controlled.
Therefore the goal is good control.
¬Pregnant women with gestational diabetes tend to have larger babies.
Leading to possibility of problems at the time of delivery which may include;
¬Injury at birth due to the baby's large size
¬Delivery by C-section
¬The baby may experience periods of hypoglycemia during the first few days of life.

¬Women with gestational diabetes have an increased risk for hypertension (increase blood pressure) during pregnancy.

After delivery:
¬The women high blood glucose levels goes back to normal levels.
¬Close monitoring is needed to check for signs of diabetes.

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The diabetes health care team may include
¬an endocrinologist or other diabetes specialist,
¬a diabetes educator
¬a registered dietitian.

As the pregnancy progresses, the health care team will help to manage the blood sugar level and adjust the diabetes treatment plan that the women need.
During pregnancy, the woman may need to consult other specialists,
such as:

An obstetrician
¬An obstetrician is needed to handle the high-risk pregnancy. The obstetrician will carefully monitor the health of the women and the baby throughout the pregnancy.

An eye specialist
¬An eye specialist can monitor diabetes related injury/ damage to small blood vessels within the eyes, which can progress during pregnancy.

A pediatrician
¬It is also recommended that the women should establish a relationship with the physician who will care for the baby after birth.

Controlling the blood sugar level before and during pregnancy is the best way to prevent diabetes complications.

Good blood sugar control during pregnancy can:

Reduce the risk of stillbirth and miscarriage;
Good blood sugar control reduces the risk of stillbirth and miscarriage
Reduce the risk of premature delivery/birth

The better the blood glucose control, the less likely the women will go into preterm labor.

Reduce the risk of birth defects

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Good blood sugar control during early pregnancy greatly reduces the baby's risk of birth defects, especially those affecting the;
¬Brain,
¬Spine,
¬Heart.

Reduce the risk of excess fetal growth.

With poor blood sugar control, extra glucose will cross the placenta.
This therefore triggers the baby's pancreas to make extra insulin, which can cause the baby to grow too large -macrosomia.

Fetal macrosomia - birth weight of 4000-4500 g (8 lb 13 oz to 9 lb 15 oz).
A large baby makes vaginal delivery difficult and puts the baby at risk of injury during birth.

Prevent complications for mom;

Good blood glucose control reduces the risk of high blood pressure, preeclampsia (high blood pressure that begins after 20 weeks of pregnancy) and other potentially serious pregnancy complications.

Prevent complications for baby;
Sometimes the baby (whose mother had diabetes) develops low blood glucose-hypoglycemia shortly after birth due to their own insulin production is too high.

The women should;
¬follow the target blood glucose range given by the physician/ diabetes team.
¬follow the diabetes treatment plan.

¬Check their blood sugar level often. Frequently monitoring blood sugar (at least three times a day) can help prevent low blood sugar (hypoglycemia) and high blood sugar (hyperglycemia).

¬Sometimes the women may need to adjust the insulin dosage depending on the blood sugar level, what they are eating, whether they are vomiting and other factors. The stage of pregnancy also matters.

¬During the last three months of pregnancy, hormones made by the placenta to help the baby grow can also block the effect of insulin in the body. Therefore, the women may need more insulin than usual to counteract that resistance.

¬Take insulin or other medications as ordered. Although oral diabetes medications are sometimes used during pregnancy, the physician/ health care provider may recommend switching to insulin.

ALERT!!
Some medications including certain drugs to treat high blood pressure, such as ACE inhibitors should not be taken during pregnancy.

Eating healthy

The diabetes diet usually includes;
¬fruits,
¬vegetables,
¬whole grains

The physician/ healthcare provider and/ or registered dietitian may suggest changes to the meal plan to help avoid problems with low blood glucose or high blood glucose.
It is also important to take prenatal vitamins containing folic acid.
Include exercise /physical activity in the daily routine

¬Obtain the physician's approval to exercise
¬At least 150 minutes a week of moderate aerobic activity.
¬start off slowly.
¬Check the blood glucose level before and after any activity, especially if taking insulin.
¬Possibly need to eat a snack or adjust insulin pump's basal rate before exercising to prevent low blood sugar.
Follow up with the regular prenatal schedule

The physician/ healthcare provider might recommend regular ultrasounds or other prenatal screening tests to monitor the baby's growth and development.

Labor and delivery for the women with Diabetes

The physician/ healthcare team will help the women determine the best time and safest way to deliver the baby.
¬Sometimes labor is allowed to begin naturally and
¬other times labor may need to be induced early to reduce the risk of complications.
During labor, the healthcare team will monitor the blood glucose level and adjust the insulin dosage accordingly.

Sometime the women may need a C-section if;
¬the baby is too large,
¬an induction is not successful or
¬ the women develop complications.

Educate the women that after the delivery of the baby;
¬It is still very important to take care of themselves

¬Continue to check the blood sugar level often, especially if breast feeding.

Anemia during pregnancy

Anemia during pregnancy can make the women;

- feel weak and tired.
  When pregnant, there is an increased risk of iron deficiency anemia, a condition in which the women do not have enough healthy red blood cells (RBC) to carry adequate oxygen to the tissues.

The body uses iron to make hemoglobin (a protein in the red blood cells that carries oxygen to the tissues).

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¬During pregnancy, the blood volume expands to accommodate changes in the body and to help the baby make his or her entire blood supply which doubles the need for iron.

¬If the women do not have enough iron stores or do not get enough iron during the pregnancy, they could develop iron deficiency anemia.

Anemia may affect the baby;

Iron deficiency anemia during pregnancy;
¬May increase the risk of a preterm delivery
¬ Low birth weight.

Increased risk of developing anemia during pregnancy occurs if:
•Have two or more closely spaced pregnancies
•Pregnant with more than one baby
•Vomiting frequently due to morning sickness
•Do not consume enough iron
•Had a heavy pre-pregnancy menstrual flow

Symptoms of anemia during pregnancy

With mild case of iron deficiency anemia, the women may not notice any symptoms. However, if they have a moderate or severe case, they may:

•Be excessively tired and weak

•Become increasingly pale

•Have heart palpitations

•Be short of breath

•Feel dizzy or lightheaded

•Have cravings to eat nonfood items (pica), such as clay or cornstarch

Laboratory test

A blood test to screen for anemia is usually done;

¬During the first prenatal visit and
¬once more during the course of the pregnancy.

Prenatal vitamins

¬Prenatal vitamins have iron.

¬Taking a prenatal vitamin that contains iron can help prevent and treat anemia during pregnancy.

¬In some cases, the physicians/ health care provider might recommend a separate iron supplement.

¬During pregnancy, the women need 27 milligrams (mg) of iron per day.

¬Pregnant women need 400 to 800 mcg or micrograms of folic acid every day, even if they are not planning to get pregnant. (0.4 to 0.8 mg) to prevent birth defects (Brain, spinal cord)

Good nutrition can help to prevent anemia during pregnancy.

Dietary sources of iron include;
¬lean red meat,
¬poultry
¬Fish
¬Iron-fortified breakfast cereals,
¬Beans and vegetables.

The iron from animal products, for example meat, is most easily absorbed.
To enhance the absorption of iron from plant sources and supplements, pair them with a food or drink high in vitamin C for example;

¬orange juice,
¬tomato juice or
¬Strawberries.
If taking iron supplements with orange juice, avoid the calcium-fortified juice.
¬Calcium is an essential nutrient during pregnancy, however calcium can decrease iron absorption.

Treating anemia during pregnancy

If prenatal vitamin that contains iron is in progress and the woman is still anemic, the physician/ health care provider may recommend testing to determine other possible causes.
In some cases, the women may need to see a hematologist (physician who specialize in treating blood disorders).
If the cause is iron deficiency, additional supplemental iron may be suggested.

If there is a history of gastric or small bowel surgery or are unable to tolerate oral iron, the women may need intravenous iron administration.

ECTOPIC PREGNANCY

An ectopic pregnancy occurs when a fertilized egg implants somewhere other than the main cavity of the uterus.

As mentioned earlier, pregnancy begins with a fertilized egg. Under normal circumstances, the fertilized egg attaches itself to the lining of the uterus.

¬An ectopic pregnancy most often occurs in one of the fallopian tubes (tubes that carry eggs from the ovaries to the uterus).
This type of ectopic pregnancy is known as a tubal pregnancy.
Sometimes, an ectopic pregnancy may occur in the ovary or neck of the uterus (cervix).

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An ectopic pregnancy cannot proceed normally.

The fertilized egg cannot survive, and the growing tissue might destroy various maternal structures.
If left untreated, life-threatening blood loss may occur.
Early treatment of an ectopic pregnancy may help preserve the chance for future healthy pregnancies.

SYMPTOMS

In the early stage, an ectopic pregnancy may not cause any signs or symptoms or early signs and symptoms of an ectopic pregnancy may be the same as those of any pregnancy;

¬Missed period,
¬Breast tenderness
¬Nausea
¬Positive pregnancy test

The first warning sign of an ectopic pregnancy is usually;
¬Light vaginal bleeding
¬with abdominal pain or pelvic pain

If blood leaks from the fallopian tube, it is also possible to feel shoulder pain or an urge to have a bowel movement (depends on where the blood pools or which nerves are irritated).
If the fallopian tube ruptures, there is often heavy bleeding within the abdomen followed by;
¬ lightheadedness,
¬fainting and
¬shock.

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ALERT!!

Teach the women to seek emergency medical help if experiencing any signs or symptoms of an ectopic pregnancy, including:
•Severe abdominal pain with vaginal bleeding
•pelvic pain with vaginal bleeding
•Extreme lightheadedness
•fainting
•Shoulder pain

*Shoulder pain - It is caused by internal bleeding irritating the diaphragm.

Some causes of ectopic pregnancy
A tubal pregnancy (the most common type of ectopic pregnancy) occurs when a fertilized egg gets lodged on its way to the uterus, often because;

¬the fallopian tube is damaged by inflammation or has an abnormal shape.

¬Hormonal imbalances or abnormal development of the fertilized egg also might play a role.

RISK FACTORS

Up to an estimated 20 in every 1,000 pregnancies are ectopic. Various factors are associated with ectopic pregnancy, including:

Previous ectopic pregnancy;
¬If the women had previous ectopic pregnancy, they are more likely to have another.
Inflammation or infection;
¬Inflammation of the fallopian tube (salpingitis)
¬ an infection of the uterus,
¬fallopian tubes or ovaries (pelvic inflammatory disease) increases the risk of ectopic pregnancy (these infections are often caused by gonorrhea or Chlamydia).

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Fertility issues;
Some research suggests an association between;
¬Difficulties with fertility; as well as use of fertility drugs, and ectopic pregnancy.
Structural concerns;

An ectopic pregnancy is more likely if;
¬the woman has an unusually shaped fallopian tube or
¬ the fallopian tube was damaged, for example during surgery.

Contraceptive choice;
Pregnancy when using an intrauterine device (IUD) is rare.
However, if pregnancy occurs, it is more likely to be ectopic.
Also for pregnancy after tubal ligation (having tubes tied). Although pregnancy after tubal ligation is rare, if it happens, it is more likely to be ectopic.

Smoking;
¬Cigarette smoking just before becoming pregnant can increase the risk of an ectopic pregnancy. And the more the woman smokes, the greater the risk.

With an ectopic pregnancy, without treatment, a ruptured fallopian tube could lead to life-threatening bleeding.

Examination/ Tests

When the physician suspects an ectopic pregnancy, a pelvic exam will be done to check for;
¬pain,
¬tenderness,
¬a mass in the fallopian tube or ovary.

However, the physical exam alone usually is not enough to diagnose an ectopic pregnancy. The diagnosis is typically confirmed with imaging studies, for example an ultrasound and blood tests.

¬With a standard ultrasound, high-frequency sound waves are directed at the tissues in the abdominal area.

¬During early pregnancy, the uterus and fallopian tubes are closer to the vagina than to the abdominal surface. The ultrasound will likely be done using a wand like device placed in the vagina (transvaginal ultrasound).

Sometimes it is too early to detect a pregnancy through ultrasound.
If the diagnosis is in question, the physician may monitor the women condition with blood tests until the ectopic pregnancy can be confirmed or ruled out through ultrasound (by four to five weeks after conception).

In an emergency situation, such as with heavy bleeding; an ectopic pregnancy might be diagnosed and treated surgically.

Treatments

A fertilized egg cannot develop normally outside the uterus.

To prevent life threatening complications, the ectopic tissue needs to be removed.
If the ectopic pregnancy is detected early,

¬an injection of the drug methotrexate is sometimes used to stop cell growth and dissolve existing cells.
But the diagnosis of ectopic pregnancy must be verified before this treatment is administered.

Monitor Human chorionic gonadotropin (HCG)
After the injection, the physician/ healthcare provider will monitor the blood for the pregnancy hormone human chorionic gonadotropin (HCG).
If the HCG level remains high, the woman may need another injection of methotrexate.

Ectopic pregnancy;
¬May be treated with laparoscopic surgery.

In the procedure, a small incision is made in the abdomen, near or in the navel.
The physician then uses a thin tube equipped with a camera lens and light (laparoscope) to look at the area.
Other equipment/ instruments may be inserted into the tube or through other small incisions;
¬to remove the ectopic tissue and repair the fallopian tube.
If the fallopian tube is damaged, it may also need to be removed.
If the ectopic pregnancy is causing heavy bleeding or the fallopian tube has ruptured,
¬the woman may need emergency surgery through a laparotomy (an abdominal incision).
¬Sometimes the fallopian tube can be repaired however; a ruptured tube has to be removed.

HCG levels

The physician will monitor the HCG levels after surgery to be sure all of the ectopic tissue has been removed. If HCG levels does not come down quickly,
an injection of methotrexate may be given.

UTERINE FIBROIDS

Uterine fibroids are noncancerous growths of the uterus that often appear during childbearing years.

¬Also known as leiomyomas or myomas, uterine fibroids are not associated with an increased risk of uterine cancer and almost never develop into cancer.
Uterine fibroids develop from;
¬myometrium (smooth muscular tissue of the uterus).

A single cell divides repeatedly, and creates a firm, rubber like mass that is distinct from nearby tissue.

The growth patterns of uterine fibroids vary,
¬sometimes they grow slowly or rapidly, or

¬ they may remain the same size.
¬Some fibroids go through growth spurts, some shrink on their own.
¬Some fibroids present during pregnancy disappear or shrink after pregnancy, as uterus goes back to normal size.

Fibroids range in size;
¬Small -seedlings, undetectable by the human eye, or
¬large bulky masses that can enlarge the uterus
¬They can be single,
¬They can be multiple,
¬in extreme cases they can expand the uterus (until it reaches the rib cage).

As many as 3 out of 4 women have uterine fibroids, but most are unaware of them because they often have no symptoms.
The physician may discover fibroids during;
¬a pelvic exam or
¬Prenatal ultrasound.

Symptoms
Some of the most common symptoms of uterine fibroids include:
•Heavy menstrual bleeding
•Prolonged menstrual periods (menstrual bleeding for 7 days or more)
•Pelvic pressure
•Pelvic pain
•Frequent urination
•Difficulty emptying the bladder
•Constipation
•Backache
•leg pains

¬Sometimes the fibroid may cause acute pain when it outgrows the blood supply, less blood supply means less nutrients
¬the fibroid begins to die; may experience pain and fever.
Fibroid location, Fibroid size and number of Fibroid influence signs and symptoms.

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Pedunculated fibroid - a fibroid that hangs by a stalk inside or outside the uterus can trigger pain by twisting on its stalk and cut off the blood supply.

Submucosal fibroids-
Fibroids grow into the inner cavity of the uterus; more likely to cause
¬Prolonged menstrual bleeding,
¬heavy menstrual bleeding and
¬sometimes a problem for the women who are attempting pregnancy.

Subserosal fibroids –
Fibroids that project to the outside of the uterus.
¬They may press on the urinary bladder and cause urinary symptoms.
¬If fibroids bulge from the back of the uterus;
¬they can press either on the rectum, causing a pressure sensation, or
¬press on the spinal nerves, resulting in back pain/ache.

Intramural fibroids- Fibroids that grow within the muscular uterine wall.
¬If massive, they can enlarge the uterus
¬or alter the shape of the uterus and
¬cause heavy periods or
¬ prolonged periods;
¬they can cause pressure and pain.

Pedunculated fibroid - a fibroid that hangs inside or outside the uterus
Submucosal fibroids- Fibroids grow into the inner cavity of the uterus

Subserosal fibroids – Fibroids that project to the outside of the uterus.

Intramural fibroids- Fibroids that grow within the muscular uterine wall.

Teach the women to follow up with the physician when;
Excessive heavy menstrual flow
Very painful periods

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Persistent pelvic pain
Spotting between periods
Bleeding between periods
Persistent pain with intercourse
Enlarged uterus
Enlarged abdomen
Difficulty emptying the bladder

ALERT!!!

Teach the women that for severe vaginal bleeding and /or sudden sharp pelvic pain FOLLOW UP WITH PHYSICIAN.

Causes of uterine fibroids

Research and clinical experience point to some factors such as:
Genetic changes
Some fibroids show changes in genes that are different from those within the normal uterine muscle cells.
There is also evidence that identical twins are more likely to both have fibroids than nonidentical twins (runs in the family).

Hormones

Estrogen and progesterone the hormones that stimulate development of the uterine lining during each menstrual cycle in preparation for pregnancy appear to play a role.
¬Estrogen and progesterone appear to promote the growth of fibroids.

¬Fibroids contain more estrogen and progesterone receptors than normal uterine muscle cells.

¬Fibroids often shrink after menopause due to a reduction in hormone production.

Other growth substances
Other substances which help the body to maintain the tissues, for example insulin-like growth factor, may also affect the growth of fibroid.

Risk factors
Some risk factors for uterine fibroids development include;

¬Being a woman of reproductive age.

¬Heredity; If the mother or sister had fibroids, then the woman is at increased risk of developing fibroids.

¬Race; black women are more likely to have fibroids than women of other racial groups. Also black women tend to have fibroids at a younger age, and also likely to have more fibroids or larger fibroids.

¬Onset of menstruation at an early age, tend to develop fibroids

¬Having a diet higher in red meat and lower in green vegetables and fruit, tend to develop fibroids

¬Drinking alcohol and beer, appear to increase the risk of developing fibroids.

Complications

¬Uterine fibroids can cause pain/ discomfort and can lead to complications for example anemia from heavy /prolong blood loss.

Pregnancy and fibroids
Fibroids may cause;
¬infertility or
¬pregnancy loss.

Submucosal fibroids can prevent implantation and also growth of the embryo. The physicians often recommend removing these fibroids before attempting pregnancy.

DIAGNOSIS
Uterine fibroids are often found during a routine pelvic exam.
The physician may palpate the irregularities in the shape of the uterus, (presence of fibroids).

TREATING FIBROIDS DURING PREGNANCY

Painful fibroids are usually treated with bed rest, ice packs, and sometimes medication when needed. The physician will recommend the treatment that is safest for the women and the baby. Symptoms usually subside within a few days.
Fibroids sometimes grow larger during pregnancy, due in part to pregnancy hormones. For reasons that are not well known, a fibroid may also get smaller during pregnancy. The physician may recommend ultrasound examinations to see whether the fibroid is growing or likely to cause complications.

Pain Management

Fibroid pain during pregnancy is usually managed conservatively by:
¬bed rest,
¬Hydration, and
¬Analgesics.

Prostaglandin synthase inhibitors for example, nonsteroidal anti-inflammatory drugs; should be used with caution, especially for prolonged use more than 48 hours in the third trimester; often associated with fetal adverse effects and neonatal adverse effects, including:
¬Premature closure of the fetal ductus arteriosus,
¬pulmonary hypertension,
¬necrotizing enterocolitis,
¬ intracranial hemorrhage,
¬oligohydramnios.

Rarely, severe pain may need additional pain medication such as;
¬narcotic analgesia,
¬epidural analgesia,
¬surgical management (myomectomy)

Myomectomy

Prior to pregnancy, myomectomy can be considered in women with recurrent pregnancy loss or infertility however, it remains unclear whether the surgical interventions cause any improvement regarding perinatal outcome and fertility rate.

It is not common for fibroids to be surgically treated in the first half of pregnancy. However studies have been completed with reports that antepartum myomectomy may be safely performed in the 1st and 2nd trimester of pregnancy if necessary.

Some acceptable indications include:

¬Intractable pain caused by a degenerating fibroid
¬Fibroid that is subserosal or pedunculated causing pain,
¬A rapidly growing or large fibroid, or
¬Large fibroids that are 5 cm, in the lower part of the uterus.

Due to the concerns regarding uterine rupture, the women who completed a myomectomy during pregnancy are more likely to have a cesarean section at delivery.

ANALGESICS

There are two main categories of analgesics that are frequently used which include:

¬Systemic nonopioid analgesics such as acetaminophen, aspirin, (nonsteroidal anti-inflammatory drugs) referred to as NSAIDs and

¬Opioid analgesics such as codeine, morphine, meperidine.

Although some medications are considered safe to take during pregnancy, the effects of other medications on the unborn baby are unknown.

Educate the pregnant women

If they are taking prescription medications before pregnancy, instruct them that as soon as they are aware that they are pregnant to discuss this with the physician regarding the safety of continuing these medications.

The physician will look at the benefits to the woman and the risk to the baby when making recommendations.

With some medications, the risk associated with not taking them can be more detrimental than the risk that is associated with taking the medications.
No medication can ever be considered 100% safe to use when pregnant!!!

TAKE THE EXAM

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