COMPLAINTS
COMPLICATING PREGNANCY
ASTHMA

Definition
Asthma is a chronic allergic disease of the airways (with tendency to have acute episodes) that is characterized by increased responsiveness of the trachea-bronchial tree to multiple stimuli.

Incidence
- Occurs in 4-5% of cases of pregnancy
- May exist as comorbidity
- 28% of the pregnant asthmatics improve (usually in mild asthmatics)
- 33% remains unchanged
- 35% deteriorate between 23 to 36 weeks of gestation (usually severe asthmatics).

Etiology
- HOST FACTORS
  - Genetic predisposition
- ENVIRONMENTAL FACTORS
  - Allergens
    - Indoor: Domestic mites, furred animals (dogs, cats, mice), cockroach allergen, fungi, house dust
    - Outdoor: Pollens, fungi, air pollution etc.
  - Infections: Upper respiratory tract infection (URTI predominantly viral), sinusitis, etc.
  - Medical conditions
    - Esophageal reflux
    - Ascaris infestations
  - Hormonal: increased levels of estrogen, progesterone and androgen
  - Tobacco smoke
    - Passive smoking
    - Active smoking
  - Drugs
    - Aspirin
    - Non-steroidal anti-inflammatory drugs (NSAIDS)
    - Beta blockers
  - Emotional stress

Complications
Uncontrolled asthma may be associated with following complications

<table>
<thead>
<tr>
<th>Fetal / Neonatal</th>
<th>Maternal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preterm birth</td>
<td>Hypertension or preeclampsia</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>Hyperglycemia</td>
</tr>
<tr>
<td>Neonatal seizure</td>
<td>Vaginal hemorrhage</td>
</tr>
<tr>
<td>Transient tachypnea of newborn</td>
<td>Premature rupture of membrane</td>
</tr>
<tr>
<td>Neonatal hypoglycemia</td>
<td>Need for cesarean delivery</td>
</tr>
<tr>
<td></td>
<td>Other perinatal complications</td>
</tr>
<tr>
<td></td>
<td>Maternal morbidity and mortality</td>
</tr>
</tbody>
</table>
Preventive management

Advise to follow strictly preventive measures and to avoid risk factors which may trigger or precipitate asthma.

- Avoid exposure to allergens such as pollens, fungi, air pollution, paints, chemical fumes, strong odors, smoke, etc.
- Avoid tobacco smoke both by active or passive smoking
- Protect yourself from catching URTI
- Avoid emotional stress
- Don’t take any medication without consulting your obstetrician

Aim of the treatment

To maintain sufficient oxygenation of the fetus by preventing hypoxic episodes in the mother.

A pregnant woman presenting with one or more of the following symptoms

- Dyspnea / breathlessness (usually worse by exertion)
- Chest tightness
- Rapid or noisy breathing
- Chest tightness
- Rapidly progressive shortness of breath
- Progressive dry cough
- Wheezing which is usually audible
- Ask for previous history of asthma or URTI
- Perform respiratory examination

On auscultation

- **Diffuse wheezes** (long, high-pitched sounds on expiration and, occasionally, on inspiration)
- **Diffuse ronchi** (short, high- or low-pitched squeaks or gurgles on inspiration, expiration, or both)
- **Bronchovesicular sound**
- **Expiratory phase of respiration equal or more prominent than inspiratory phase**

On examination

- **Tachypnea**
- **Wheezing**: Initially heard only during expiration, but, later occurs during both expiration and inspiration.
- **Hyper expanded chest** and accessory muscles are being used.

Start appropriate homoeopathic treatment in consultation with Obstetrician and Chest specialist

- Review the case after 4-5 days.
- Advise to report immediately if there is any worsening of the symptoms.
- Advocate preventive measures.

Along with other symptom presence of following signs

- **Absence of wheeze**: wheezing may disappear as broncho-constriction worsens
- **Pulsus paradoxicus**: difference in systolic blood pressure between inspiration and expiration, more than 15 mm Hg. (value greater than 25 mm Hg. usually indicates severe airway obstruction)

Indicative of severe airflow obstruction

Refer to Chest specialist WITHOUT DELAY for management of Status asthmaticus
Homoeopathic management

Following are the acute medicines which can be used as and when indicated during acute exacerbation

<table>
<thead>
<tr>
<th>Medicines</th>
<th>General indications</th>
<th>Particular symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blatta orientalis</td>
<td>Stout and obese women.</td>
<td>• Asthma especially when associated with bronchitis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Severe attacks of coughing and dyspnea.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Asthma worse in rainy weather, new moon and full moon, better in knee chest position.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Indicated after Arsenic album when its action is insufficient.</td>
</tr>
<tr>
<td>Lobelia inflata</td>
<td>Fleshy; relaxation of muscles; cold sweat, weakness and prostration; nausea, vomiting with constant salivation; aversion to tobacco, smell of tobacco; amelioration towards evening.</td>
<td>• Dyspnea from constriction of chest worse any exertion.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Asthmatic attack preceded by prickling sensation all over, even in fingers and toes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dyspnea with sense of lump in the pit of stomach rising into mouth.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Rattling in chest but no expectoration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Aggravation from exposure to cold or slightest exertion, going up or down the stairs.</td>
</tr>
<tr>
<td>Grindelia robusta</td>
<td>Longing for light; company and sunshine.</td>
<td>• Asthma, with profuse tenacious and tough expectoration, which relieves.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cannot breathe when lying down, must sit up to breathe; can breathe only while sitting up and keeping awake.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Nervous asthma; inspiration easy, expiration difficult.</td>
</tr>
<tr>
<td>Aralia racemosa</td>
<td>Proneness to respiratory affections; drenching sweat during sleep; extreme sensitiveness to draughts; aggravation at 11 p.m. and in Spring.</td>
<td>• Dry cough coming on after first sleep, after middle of night, better by slight expectoration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cough caused by tickling in throat and constriction of chest.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Asthma with spasmodic cough aggravated on lying down at night, wants to keep head high.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dry wheezing respiration; sense of impending suffocation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Whistling worse during inspiration; must sit up.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Feels as if a foreign body were in throat.</td>
</tr>
</tbody>
</table>

Constitutional homoeopathic treatment can be given on the basis of symptom similarity.
GLYCOSURIA

Introduction
Glycosuria is a common finding in pregnancy due to increased renal blood flow, leading to lowered renal threshold. However, glycosuria in pregnancy must not be overlooked as it may be the first sign of gestational diabetes.

GESTATIONAL DIABETES MELLITUS (GDM)

Definition
Gestational diabetes is the glucose intolerance of variable degree that is first recognized during pregnancy.

Introduction
- It is characterized by hyperglycemia of varying severity diagnosed during pregnancy (without previously known diabetes) and usually (but not always) resolving within 6 weeks of delivery.
- It risks to the pregnancy itself include congenital malformations, increased birth weight and an elevated risk of perinatal mortality.
- It causes increased risk to woman of developing diabetes (T2D or Type 2 diabetes) later in life.

Etiology
- The mechanism is not completely well understood but hormones of pregnancy appear to interfere with insulin action.

Symptoms
- Increased thirst (polydipsia) and increased urination (polyuria) are more commonly noted (although other symptoms can be present).
- As the pregnancy itself causes increased urination, these symptoms are difficult to recognize as abnormal.
- A larger than normal baby during pregnancy (noted on routine prenatal examination) may prompt diabetic screening.

Important
During each ante-natal visit, urine is examined as a routine for presence of sugar.
Examine urine for presence of sugar during each antenatal visit

In case if sugar is present in urine

Examine second fasting morning specimen of urine collected a little later after discarding overnight urine

Check for sugar and acetone

Sugar is present

Glycosuria

Estimate blood sugar
- Fasting
- Post prandial, (PP i.e. 2 hours after meals).

Blood sugar - normal

Reduced renal threshold

Ignore and recheck for the presence of sugar in urine after every two weeks.

If the severity increases, check the fasting and P.P. blood sugar again

Fasting more than 95 mg% or PP more than 120 mg% or both

Screen for gestational diabetes

Advise for oral glucose challenge test (GCT). This is a first step screening test for Gestational Diabetes Mellitus (GDM)

Sugar and acetone both are present

Confirmed case of complicated & pre-existing clinical diabetes

Refer to Obstetrician & Diabetologist for follow up and care

Blood sugar - normal

Fasting more than 130 mg%

Clinical pre-existing diabetes

No need to perform GTT which may be dangerous

Refer to Obstetrician and Diabetologist

Contd...
Oral glucose challenge test (GCT)  
50 gm glucose is given orally

Plasma Glucose after 1 hour: < 140 mg/dL  
Check for the presence of sugar in urine after every two weeks.  
If the severity increases, check the Fasting and P.P. blood sugar again.  
Fasting more than 95mg% or PP more than 120 mg% or Both

Plasma Glucose after 1 hour: > 140 mg/dL  
80% sensitivity for GDM

If Gestational Diabetes Mellitus (GDM) confirmed

Refer to Obstetrician and Diabetologist for further assessment

Obtain Fasting Plasma Glucose (FPG) next day  
FPG: 95mg or more/dL

• Gestational Diabetes Mellitus (GDM confirmed)  
• No need to perform GTT which may be dangerous

• Advise dietary management  
• Start appropriate homoeopathic treatment  
• Review after 1 week with fasting and Post prandial blood sugar

No change in blood sugar values

Type A2 Gestational Diabetes Mellitus

Refer to Obstetrician and Diabetologist for management

Blood sugar values improved with dietary management and homeopathic treatment

Type A1 Gestational Diabetes Mellitus

Continue therapeutic and dietary management
Glucose Challenge Test (GCT)  
(1 hour after a 50-gram glucose drink)

<table>
<thead>
<tr>
<th>Glucose Level</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 140* mg/dL</td>
<td>Normal glucose tolerance</td>
</tr>
<tr>
<td>140* mg/dL</td>
<td>Abnormal, needs OGTT (see below)</td>
</tr>
</tbody>
</table>

* Some use a cutoff of >130 mg/dL (7.2 mmol/L) because that identifies 90% of women with gestational diabetes, compared to 80% identified using the threshold of >140 mg/dL (7.8 mmol/L).

Oral glucose tolerance test (OGTT)  
(100-gram glucose drink)**

<table>
<thead>
<tr>
<th>Time After Load</th>
<th>Glucose Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting*</td>
<td>95 mg/dL (5.3 mmol/L)</td>
</tr>
<tr>
<td>1 hour after load*</td>
<td>180 mg/dL (10.0 mmol/L)</td>
</tr>
<tr>
<td>2 hours after load*</td>
<td>155 mg/dL (8.6 mmol/L)</td>
</tr>
<tr>
<td>3 hours after load***</td>
<td>140 mg/dL (7.8 mmol/L)</td>
</tr>
</tbody>
</table>

* If two or more values are above the criteria, gestational diabetes is diagnosed.
** A 75-gram glucose load may be used, although this method is not as well validated as the 100-gram OGTT;
*** The 3-hour sample is not drawn if 75 grams is used.

Complications that may be associated with Gestational Diabetes Mellitus (GDM)

- High risk of perinatal loss
- Pre-eclampsia
- Increased risk of macrosomia, major congenital malformations
- Tendency to develop overt diabetes later in pregnancy
- Hydramnios
- Risk of developing hypoglycemia and birth trauma (brachial plexus injury) in fetus

General management

- **Patient needs more frequent ante-natal visits:** In uncomplicated cases, Antenatal supervision is done monthly up to 20 weeks and thereafter every 2 weeks till 30th week.
- **Fasting blood sugar level is maintained at less than 90mg %**.
- **Frequent blood sugar estimation** is required as urine examination may not be informative.
### Dietary management for abnormal Glucose Challenge Test (GCT)

- Less sugar intake
- Low carbohydrate, low fat and high fiber diet
- Six small meals in place of 3 large meals
- Diet should contain carbohydrate 200-250 gm daily. Protein should be 1.5 gm per kg body weight and calorie intake is kept at 30-35 calories / kg body weight.

### Homoeopathic management

Constitutional homoeopathic treatment can be given on the basis of symptom similarity.
**Introduction**

A normal heart has good reserve power to withstand the extraload of pregnancy and delivery. However, a damaged heart may not have enough reserve to sustain and cardiac failure is likely to occur.

As such all cases presenting with pre-existing heart disease or are diagnosed with heart disease during pregnancy must be considered as high risk pregnancies.

Cardiac failure can occur between 30-32 weeks, but mostly occurs during labor or soon following delivery.

A pregnant woman complaining of
- Dyspnea
- Chest pain
- Palpation

On examination:
- Presence of Diastolic murmur
- Cardiac enlargement
- Loud systolic murmur with thrill
- Arrythmia

**Suspect cardiac disease**

**Assess for grade**

- Additional factors responsible for deterioration of cardiac function
  - Advancing age of mother
  - Left ventricular hypertrophy
  - History of previous heart failure
  - Pregnancy complications such as anemia, toxemia, infection

**Cardiac disease but no limitation of physical activity**
- Grade I
  - Refer to Obstetrician for adequate ante-natal care

**Cardiac disease with slight limitation of physical activity**
- Grade II
  - Requires hospitalization 2 weeks before expected date of delivery under supervision of Obstetrician

**Cardiac disease with marked limitation of activity**
- Grade III
  - Requires hospitalization under supervision of Obstetrician and Cardiologist in an intensive care set up

**Cardiac discomfort even at rest**
- Grade IV
  - Requires immediate hospitalization under supervision of Obstetrician and Cardiologist in an intensive care set up
**General management**

- Take adequate rest: 12 hours sleep on flanks including 2 hours at noon
- Avoid exertion
- Avoid undue excitement
- Avoid high calorie and spicy diet. Diet should contain low salt, low carbohydrate and fat but more of protein
- Avoid cold and infections (the consulting cardiologist may prescribe prophylactic antibiotics)
- Take care of oral health to prevent infections
- Regular ante-natal check up every 2 weeks till 28 weeks

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**Must remember**

Many symptoms of pregnancy mimic heart disease, thus it is important to differentiate it from actual heart diseases.

- **Tachycardia**: Pulse increases by 10-20 beats / min.
- **Hemic murmur**: soft functional murmur, is not consistent and intensity changes
- **Edema**
- **Breathlessness**
- **Sweating**
- **Light headedness**
- **Syncope**
Tuberculosis may be pre-existing or diagnosis is made for the first time during pregnancy.

**Pre-existing tuberculosis**
- Patient already on anti-tubercular treatment (ATT)
  - ATT is continued throughout pregnancy and puerperium
- Patient not on anti-tubercular treatment
  - Refer to Medicine specialist or Chest physician for appropriate management.

**Clinical suspicion of tuberculosis**
- Family history of tuberculosis
- Recent contact with TB case

**Advise for sputum examination for Acid fast Bacilli (AFB)**
- 3 samples on 3 consecutive days
  - Negative
    - Request for AFB examination in 24 hour collected sputum
      - Negative
        - Reassess for presence of active TB
      - Positive
        - Positive
          - Refer to Medicine specialist or Chest physician for appropriate management and treatment.
  - Positive
    - Refer to Medicine specialist or Chest physician for appropriate management.

**General consideration**
- Provided the patient remains under medical supervision with adequate treatment and care during pregnancy, labor and post natal period, pregnancy has got no deleterious effect on course of disease; nor has the disease any adverse effect on pregnancy.
- ATT can be started during pregnancy and is continued for at least 6 months following delivery or until disease is arrested.
- Patients with tuberculosis during pregnancy must maintain good nutrition.
- Breast feeding is contraindicated only in case of active tuberculous lesion in the mother. In such case the baby is segregated promptly from the mother after delivery. The baby should be vaccinated with BCG as soon as possible. A tuberculin test is done at 6-8 weeks. In case of negative result, BCG is repeated.
Introduction
The human immunodeficiency virus (HIV) is a retrovirus that infects cells of the human immune system, destroying or impairing their function. In the early stages of infection, the person has no symptoms. However, as the infection progresses, the immune system becomes weaker, and the person becomes more susceptible to so-called opportunistic infections.

The most advanced stage of HIV infection is acquired immunodeficiency syndrome (AIDS). It can take 10-15 years for an HIV-infected person to develop AIDS; antiretroviral drugs can slow down the process even further.

HIV is transmitted through unprotected sexual intercourse with an infected person, transfusion of contaminated blood and sharing of contaminated needles. HIV may be transmitted to the infant during pregnancy, delivery or through breastfeeding.

Incidence
Perinatal route of transmission accounts for 10% of new infections in the world (10.92% in India). The route of transmission has an efficiency of 20-40%.

Effect

Effect of pregnancy on HIV disease
- No effect on the disease progression

Effect of HIV disease on pregnancy
- Spontaneous abortion
- Perinatal mortality
- Intrauterine growth retardation
- Low birth weight
- Pre-term delivery

Perinatal transmission of HIV infection to fetus / infant (transmission during pregnancy, delivery and breastfeeding)

- During pregnancy
- Around the time of labor and delivery
- Post partum through breast feeding

- If no interventions are provided, an estimated 20–25% of the infants of HIV-infected women will acquire HIV up to and including during delivery.
- Transmission is increased in women with more clinically advanced disease, low CD4 cell counts, and high HIV viral load.
- Antiretroviral (ARV) medicines and optimal infant feeding practices are necessary to reduce HIV transmission to the infant and to promote child survival.

Factors affecting pre-natal transmission

<table>
<thead>
<tr>
<th>Factor</th>
<th>Possible management to reduce risk of transmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>High HIV viral load</td>
<td>- Maintenance of general health&lt;br&gt;- Maintenance of good nutritional status&lt;br&gt;- Avoidance of communicable diseases</td>
</tr>
<tr>
<td>High genital tract viral load</td>
<td>- Maintenance of general health&lt;br&gt;- Prevention of STDs during pregnancy</td>
</tr>
<tr>
<td>Low CD4 Count</td>
<td>- Maintenance of general health&lt;br&gt;- Maintenance of good nutritional status</td>
</tr>
<tr>
<td>Decreased CD4:CD8 ratio</td>
<td>- Maintenance of general health&lt;br&gt;- Maintenance of good nutritional status</td>
</tr>
</tbody>
</table>
Positive HIV test

- Counsel on implications of a positive test.
- Refer the woman to HIV services for further assessment.
- Support adherence to ARV (Anti retroviral treatment).
- Counsel on infant feeding options.
- Provide additional care for HIV-positive woman
- Counsel on family planning.
- Counsel on safer sex including use of condoms.
- Counsel on benefits of disclosure (involving) and testing her partner.
- Provide support to the HIV-positive woman.

Negative HIV test

- Counsel on the importance of staying negative by practicing safer sex, including use of condoms.
- Counsel on benefits of involving and testing the partner.

She refuses the test or is not willing to disclose the result of previous test or no test results available.

- Counsel on safer sex including use of condoms.
- Counsel on benefits of involving and testing the partner.

Check for HIV status of pregnant woman

- Test and counsel all pregnant women for HIV at the first antenatal visit following her voluntary informed consent.

Provide key information on HIV

- What is HIV and how is HIV transmitted?
- Advantage of knowing the HIV status in pregnancy.
- Explain about HIV testing and counseling including confidentiality.
- Perform the Rapid HIV test if not performed during this pregnancy.

Avoidance of communicable diseases
- Prompt treatment of opportunistic infections and STDs
- Prompt treatment of STDs

Counseling of woman for avoidance of high risk behavior during pregnancy

Advising for diet rich in Vitamin A
- (Vitamin A supplements are not advised in early months of pregnancy because it can possibly cause fetal malformations, as seen in animal studies)

Strict avoidance of substance abuse, illicit drug use and smoking
- Appropriate re-habilitation to be followed

Avoid invasive procedures such as amnioscopy and amniocentesis

Judicious use of forceps to shorten duration of labor

Developing opportunistic infection (OI) during pregnancy

- Avoidance of communicable diseases

Suffering from other sexually transmitted infections (STD)

- Prompt treatment of opportunistic infections and STDs
- Prompt treatment of STDs

Acquiring HIV infection during pregnancy

- Counseling of woman for avoidance of high risk behavior during pregnancy

Undergoing seroconversion during pregnancy

- Advising for diet rich in Vitamin A

Unprotected sex with multiple partners

- (Vitamin A supplements are not advised in early months of pregnancy because it can possibly cause fetal malformations, as seen in animal studies)

Vitamin A deficiency in mother

- Pregnancy increases the risk of vitamin-A deficiency for both the mother and newborn, and vitamin-A deficiency in the HIV-positive pregnant mother has been associated with increased infant mortality.

Substance abuse

- Illicit drug use during pregnancy
- Cigarette smoking

Chorioamnionitis

Invasive fetal monitoring during pregnancy

Preterm delivery

Increased duration of membrane rupture

Avoidance of communicable diseases

Suffering from other sexually transmitted infections (STD)

Acquiring HIV infection during pregnancy

Undergoing seroconversion during pregnancy

Unprotected sex with multiple partners

Vitamin A deficiency in mother

Substance abuse

Chorioamnionitis

Invasive fetal monitoring during pregnancy

Preterm delivery

Increased duration of membrane rupture
Additional care for the HIV positive pregnant woman

- Be sensitive to her special concerns and fears.
- Advise on the importance of good nutrition.
- Use standard precautions as for all women.
- Explain her the importance of early diagnosis and management
  - sexually transmitted diseases if present
  - diagnosis and treatment of any acute infections.
- Advise her that she is more prone to infections and should seek medical help as soon as possible if she has:
  - fever
  - persistent diarrhea
  - cold and cough — respiratory infections
  - burning urination
  - vaginal itching / foul-smelling discharge
  - no weight gain
  - skin infections
  - foul-smelling lochia.
- Advise her to deliver in a facility and to go to a facility as soon as her membranes rupture or labor starts.
- Tell her to take ARV medicine as instructed.
- Discuss the infant feeding options.
- Inform her that lochia can cause infection to other people and therefore she should dispose of sanitary pads safely.
- Counsel her on family planning.
- If not breastfeeding, advise her on breast care.
- **Maintain confidentiality of the patient. Her HIV status must not be revealed to any person without her voluntary consent.**

Care of HIV infected women during labor

- **Attempt should be made to reduce duration of labor by judicious use of forceps, episiotomy, etc.**
- **Vaginal vs. Cesarean delivery**
  - The consulting obstetrician should take the decision. Caesarean section can potentially minimize the exposure of infant to maternal lower genital tract secretions and reduce the risk of transmission.

Care of infant born of HIV positive mother

- **Judicious use of anti-retroviral drugs by the consulting obstetrician / pediatrician**
- **Explain to the mother risks of HIV transmission through breastfeeding and not breastfeeding**
  - Risk of transmission is highest in earliest months of breast feeding but increased duration of breast feeding increases risk.
  - The risk may be reduced if the baby is breasted exclusively
  - Mastitis and nipple fissures increase the risk of transmission of infection to the breast fed infant.
  - The risk of not breastfeeding may be much higher because replacement feeding carries risks particularly related to:
    - diarrhea because of contamination from unclean water, unclean utensils or because the milk is left out too long.
    - malnutrition because of insufficient quantity given to the baby, the milk is too watery, or because of recurrent episodes of diarrhea.
  - Mixed feeding increases the risk of diarrhea. It may also increase the risk of HIV transmission.

**Important:** In each case the consulting physician needs to weigh the potential risk of breast feeding with the potential benefits and advise accordingly.
Breast feeding vs. replacement feeding

- If acceptable, feasible, safe and affordable and
- If mother can maintain hygiene

Breast feeding may be avoided

- If mother cannot afford or
- cannot maintain hygiene

The infant may be breastfed
- But the breast feeding should be restricted to only 3 - 6 months, following which the infant is weaned.

Summary of recommendations by WHO

- WHO recommends that all pregnant women with HIV receive antiretroviral medicines, either ARV therapy (ART) for life or combined ARV for prophylaxis, to reduce vertical transmission.
- Pregnant women in need of ART can be asymptomatic, so CD4 testing should be performed whenever HIV is diagnosed in pregnancy.
- For HIV-positive women who present to health services late in the pregnancy or at labor and delivery, ARVs are also recommended for both the mother and newborn.
- The HIV-exposed infant requires ARV prophylaxis at birth.
- WHO does not currently recommend ARV drugs be given to infants solely to prevent breastfeeding transmission.

Homoeopathic management

Homoeopathic medicines on constitutional basis and symptom similarity can be given to the infected female for treatment of acute infections and for some opportunistic infections, to maintain and improve the quality of life. Homoeopathic medicines have been found effective in delaying the progression of the disease and also improving quality of life in few clinical trials conducted by CCRH and other research workers.
Introduction

- Malaria is a common cause for high mortality rate during pregnancy, especially in tropical countries.
- Malaria during pregnancy can leave adverse effect on mother and fetus, including maternal anemia, fetal loss, premature delivery, IUGR, low birth weight infant.
- Pregnancy reduces a woman’s immunity to malaria, making her more susceptible to severe malaria than other adults.
- Malaria is a significant contributing factor to anemia. If severe, anemia puts women at risk of hemorrhage and death. Maternal anemia increases the risk of premature delivery and a low birth weight baby.
- When maternal malaria immunity is low, a serious risk of maternal or infant death exists. When acquired maternal immunity is high, there is still risk.
- Treatment of acute malaria is more complicated in pregnancy.

Definition

Malaria is protozoal disease caused by infection with parasites of plasmodium and is transmitted through anopheles mosquitoes. In the human body, the parasites multiply in the liver, and then infect red blood cells.

Etiology

Causative organisms

1. *Plasmodium falciparum*
2. *Plasmodium vivax*
3. *Plasmodium malariae*

*Plasmodium falciparum* and *Plasmodium vivax* are the most common. *Plasmodium falciparum* is the most deadly.

Transmission

Mode of transmission

- Female anopheles mosquito
- Blood transfusion

Malaria transmission rates can differ depending on local factors such as rainfall patterns (mosquitoes breed in wet conditions), the proximity of mosquito breeding sites to people, and types of mosquito species in the area. Some regions have a fairly constant number of cases throughout the year - these countries are termed “malaria endemic”. In other areas there are “malaria seasons” usually coinciding with the rainy season.

Large and devastating epidemics can occur when the mosquito-borne parasite is introduced into areas where people have had little prior contact with the infecting parasite and have little or no immunity to malaria, or when people with low immunity move into areas where malaria cases are constant. These epidemics can be triggered by wet weather conditions and further aggravated by floods or mass population movements driven by conflict.

Incidence

- Non-immune pregnant women are at high risk of malaria. The illness can result in high rates of miscarriage and cause over 10% of maternal deaths (soaring to a 50% death rate in cases of severe disease) annually.
- Semi-immune pregnant women risk severe anemia and impaired fetal growth even if they show no signs of acute disease. An estimated 200,000 of their infants die annually as a result of malaria infection during pregnancy.
- HIV-infected pregnant women are also at increased risk.
Complications

A patient may present with complications of malaria or they may develop suddenly

- Hypoglycemia: complication in P. falciparum (blood glucose less than 40mg/dL)
- Severe anemia Hb: 7-8% (more common in 16-29 weeks)
- Low birth weight infants (19%)
- Folate deficiency
- Acute pulmonary edema (more common in 2nd and 3rd trimester)
- Acute renal failure
- Spontaneous bleeding and Disseminated Intravascular Coagulation (DIC)
- Jaundice
- Cerebral malaria
- Generalized seizures
- Fluid electrolyte imbalance

Differential diagnosis

- Acute fever: UTI and septicemia
- Convulsions: eclampsia
- Jaundice: Viral hepatitis, acute fatty liver
- Shock: septicemic shock and hemorrhagic shock
- Abnormal behavior: Psychosis
Clinical presentation
A case of malaria may present with
- Fever with chills
- Headache
- Nausea and vomiting
- Sweating
- Muscular pains
- Convulsions

Look and check for
- Signs of Anemia (where malaria is most common, anemia is common feature in pregnancy)
- Jaundice

Findings on examination
- Pallor
- Hepatomegaly
- Splenomegaly (may be absent or small in 2nd half of pregnancy)

Request for investigations
- Complete blood count
- Urine and blood glucose test
- Peripheral blood smear (taken between 6-12 hours interval to confirm the diagnosis)
- Rapid malaria test (if available): specifically for P. Falciparum and P. Vivax

Confirm diagnosis by Identification of Malaria parasite by examining both thick and thin smears. "Thick" smear makes it possible to examine a large amount of blood and the species of parasite can be identified by looking at a corresponding "thin" smear.

Parameters for poor prognosis
- Hyperparasitemia (> 5% or >25000/µL)
- Hemoglobin: <7g / dl
- Blood glucose < 40mg / dl
- Thrombocytopenia
- Hemoglobinuria

Refer immediately to nearest healthcare facility

In cerebral malaria (caused by Plasmodium falciparum), clinical findings may be:
- Confusion
- Coma
- Neurologic focal signs
- Severe anemia
- Respiratory difficulties

Refer immediately to Obstetrician for management

Start homoeopathic treatment in consultation with Obstetrician

Review after 4-5 days

Impovement

No Improvement

Continue therapeutic and preventive measures
Preventive measures

Prevention focuses on reducing the transmission of the disease by controlling the malaria-bearing mosquito. Two main interventions for vector control are:
- Use of mosquito nets treated with long-lasting insecticide, a very cost-effective method
- Indoor residual spraying of insecticides

These core interventions can be locally complemented by other mosquito vector control methods (for example, reducing standing water habitats where insects breed, among other approaches).

**Important**
- Homoeopathic treatment is to be weighed in accordance with availability of anti malarial treatment.
- In case non availability of anti malarial treatment, homoeopathic treatment may also be considered according to the symptom similarity.
- Homoeopathic treatment may also be given along with anti-malarial treatment.
- Homoeopathic may be considered as prophylactic measure in patients living in area where malaria is prevalent.

Homoeopathic management

Commonly indicated homoeopathic medicines with their indications

<table>
<thead>
<tr>
<th>Medicines</th>
<th>General indications</th>
<th>Particular symptoms</th>
</tr>
</thead>
</table>
| Arsenic album       | Chilly patient; rapid disproportionate prostration; burning pains better by heat (except headache); cadaveric odor of discharges and body; frequent thirst for small quantity of water; craving for acids, coffee and milk; anxiety, anguish, fear of death, restlessness. | • Alliments from exposure to damp, cold weather.  
• Marked periodicity of fever.  
• Paroxysm incomplete; generally characterized by a short chill stage, prolonged fever and very little or no perspiration with marked exhaustion.  
• Shaking chills; craves hot drinks during chill.  
• Externally cold and internal burning heat.  
• Great heat at about 3 am; heat beginning in stomach and precordial region, passing to rest of the body.  
• Sweat at the end of fever, which ameliorates pain; unquenchable thirst during sweat.  
• Fever worse at midday and midnight, from cold drinks and cold foods. |
| Eupatorium perfoliatum | Chilly patient; periodicity of complaints, occurring particularly in summer and autumn; yellow eyes, face, vomitus, etc.; worn out constitution; restless. | • Chill between 7 and 9 a.m. preceded by thirst, great soreness and aching in bones.  
• Vomitting of bile at the end of chill stage or hot stage; knows chill is coming because he cannot drink enough; drinking hastens chill and causes vomiting.  
• Deep aching, bone-breaking pains; feels bruised and sore; worse in back.  
• Fever with throbbing headache.  
• Painful soreness of eyeballs.  
• Perspiration relieves all symptoms except headache. |
| Cinchona officinalis | Chilly patient; complaints of pregnant women after exhausting discharges and / or intermittent fevers; history of profuse menses and prolonged diarrhea; pale, sickly expression; sensitive to draughts of air, yet wants to be fanned; desire for sour and sweet things; intolerance to fruits; aversion to mental and | • Marked periodicity of fever; returns on 7th or 14th day.  
• Malarial fever never returns at night.  
• Chill generally in forenoon; commencing in the breast; thirst before chill, for little water and often; chill followed by fever and sweat.  
• No thirst during chill and heat; violent thirst after heat. |

Contd...
<table>
<thead>
<tr>
<th><strong>Chininum sulphuricum</strong></th>
<th><strong>Nyctanthes arbortristis</strong></th>
<th><strong>Caesalpenia bonducella</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>physical exertion; apathetic, indifferent, tacitum, oversensitive to noise, touch and jar; full of care.</td>
<td>Profuse debilitating perspiration caused by every little exertion, especially on single part.</td>
<td>Fever very irregular in appearance; may come at any time; appears with chilliness and shivering one day and on another day appears with slight chill.</td>
</tr>
<tr>
<td>Drawing, tearing pains in every joint; pains worse from touch and better from hard pressure.</td>
<td>Drawing, tearing pains in every joint; pains worse from touch and better from hard pressure.</td>
<td>Fever appears between 8 - 10 a.m. or between 2 - 4 p.m.</td>
</tr>
<tr>
<td>One hand icy cold and other hand warm.</td>
<td>One hand icy cold and other hand warm.</td>
<td>Fever occurs with chilliness and shivering.</td>
</tr>
<tr>
<td>There may be associated flatulence with distended abdomen.</td>
<td>There may be associated flatulence with distended abdomen.</td>
<td>Short heat stage.</td>
</tr>
<tr>
<td>Fever comes at regular intervals, at the same hour every day.</td>
<td>Fever comes at regular intervals, at the same hour every day.</td>
<td>Thirst during the heat stage; no thirst during afternoon fever but thirst during hot stage in morning fever.</td>
</tr>
<tr>
<td>General chilliness especially in the back begins at 3:00 p.m. daily.</td>
<td>General chilliness especially in the back begins at 3:00 p.m. daily.</td>
<td>Perspiration on face, chest, neck and shoulders.</td>
</tr>
<tr>
<td>Shivering even in a warm room.</td>
<td>Shivering even in a warm room.</td>
<td>After fever: extreme weakness, disinclination to work and to talk; wants to lie down quietly with closed eyes.</td>
</tr>
<tr>
<td>Thirst in all stages.</td>
<td>Thirst in all stages.</td>
<td></td>
</tr>
<tr>
<td>Increasing fever and prostration.</td>
<td>Increasing fever and prostration.</td>
<td></td>
</tr>
<tr>
<td>Profuse night sweats; debilitating sweat relieves but exhausts.</td>
<td>Profuse night sweats; debilitating sweat relieves but exhausts.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bilious and obstinate remittent fever.</td>
<td>Fever very irregular in appearance; may come at any time; appears with chilliness and shivering one day and on another day appears with slight chill.</td>
</tr>
<tr>
<td></td>
<td>Fever with predominance of bilious symptoms.</td>
<td>Fever appears between 8 - 10 a.m. or between 2 - 4 p.m.</td>
</tr>
<tr>
<td></td>
<td>Insatiable thirst before and during chill and heat.</td>
<td>Fever occurs with chilliness and shivering.</td>
</tr>
<tr>
<td></td>
<td>Bitter vomiting at the close of chill.</td>
<td>Short heat stage.</td>
</tr>
<tr>
<td></td>
<td>Sweat generally not marked.</td>
<td>Thirst during the heat stage; no thirst during afternoon fever but thirst during hot stage in morning fever.</td>
</tr>
</tbody>
</table>

**Chininum sulphuricum**

**Nyctanthes arbortristis**

**Caesalpenia bonducella**

*Chininum sulphuricum*

*Chininum sulphuricum*

*Chininum sulphuricum*
Cesarean section (CS) is the most common operation in obstetrics, with rising incidence in most countries. As a consequence of this operation late scar dehiscence may occur, which may lead to uterine rupture in a subsequent pregnancy.

**Most common conditions for which a cesarean section may be required**
- Prolonged or ineffective labor
- Placenta previa
- Placenta abruptio
- Cephalo-pelvic disproportion
- Mal-presentation
- Prolapsed cord
- Fetal distress
- Medical problems
- Multiple births
- Previous cesarean delivery
- Birth defects

**Type of uterine incision for the C-section**

<table>
<thead>
<tr>
<th>Incision Type</th>
<th>Description</th>
<th>Risk of Uterine Rupture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low transverse incision</td>
<td>Is made sideways across the lower part of the uterus. It usually bleeds less than an incision made higher on the uterus. It also forms stronger scars. A woman, who had one or even two of these incisions, may be a candidate for Vaginal birth after cesarean (VBAC).</td>
<td>0.2 - 1.5 %</td>
</tr>
<tr>
<td>Low vertical incision</td>
<td>Is made low on the uterus, where the uterine wall is thinner. If a woman had a low vertical incision that doesn’t extend into the upper uterus, she may still be a candidate for VBAC. However, it’s sometimes difficult to determine if the scar is low enough to minimize the risk of uterine rupture. Greater risk of postoperative wound dehiscence and development of incisional hernia.</td>
<td>1-7%</td>
</tr>
<tr>
<td>Classical incision (also called a high vertical incision)</td>
<td>This type of incision was once used for all C-sections. It is located two fingers-breadth above the pubic symphysis. It’s now used only in emergency situations. VBAC isn’t recommended for women who’ve had a classical uterine incision. Greater risk of postoperative wound dehiscence and development of incisional hernia.</td>
<td>4 - 9%</td>
</tr>
</tbody>
</table>
| T-shaped, inverted T-shaped or J-shaped incision | These incisions are used only in emergencies. They’re not planned. If a woman has any of these scars, VBAC isn’t an option. The risk of uterine rupture is too great. | }
Woman with previous history of Cesarean section during pregnancy complains of
- Pain over scar
- Tenderness over scar
- Vaginal bleeding

Uterine scar dehiscence
- Dehiscence is a separation that involves only a portion of the uterine scar and does not disrupt the overlying visceral peritoneum (uterine serosa) and that does not significantly bleed from its edges.
- The fetus, placenta, and umbilical cord must be contained within the uterine cavity, without a need for cesarean delivery because of fetal distress.

Uterine rupture
- Uterine rupture is defined as a full-thickness separation of the uterine wall and the overlying serosa.
- Rupture is often traumatic and may occur in an intact uterus or involve the majority of a uterine scar from previous cesarean delivery.
- It is associated with clinically significant uterine bleeding; fetal distress; expulsion or protrusion of the fetus, placenta, or both into the abdominal cavity; and the need for prompt cesarean delivery, uterine repair, or hysterectomy.

Other risk factors for uterine rupture in addition to the type of uterine incision
- **Single-layer suturing** of the prior C-section incision instead of two. The scar may not be strong.
- **Short time since prior C-section**: VBAC less than 18 - 24 months after C-section has 2-3 times greater risk of uterine rupture. The longer the interval between deliveries, the lower the risk of rupture.
- **Thickness of the scar**: The thicker the scar is, the stronger it is, and the smaller the chances of rupture. Women who have uterine rupture generally have a very thin scar.

**Important**
- Repeat cesarean deliveries is of concern, because delivery of a baby by C-section has been linked with higher rates of complications for both mother and infant
- Attempted vaginal child birth in women with single previous low transverse cesarean section is associated with lower risk of complications for both mother and baby as compared to routine repeat cesarean section.
- The morbidity associated with successful vaginal delivery is 1/5th of the elective cesarean section.
- Although a scar from cesarean delivery is a well-known risk factor for uterine rupture, most events that involve disruption of the uterine scar result in uterine-scar dehiscence rather than frank uterine rupture.
- Uterine rupture and uterine scar opening during labor could be predicted by ultrasound measurements of the previous scar and could help physicians decide which women would be candidates for a vaginal delivery.

**SCAR DEHISCENCE**

**Woman with previous history of Cesarean section during pregnancy complains of**
- Pain over scar
- Tenderness over scar
- Vaginal bleeding

Refer to Obstetrician for assessment of scar dehiscence, in which case the patient requires urgent hospitalization.
Woman with previous history of Cesarean section during labor complains of

- Suprapubic pain persisting between uterine contractions
- Slight vaginal bleeding
- Bladder tenesmus with frequent desire to pass urine
- Unexplained tachycardia
- Falling blood pressure
- Alteration in fetal heart rate

Refer to Obstetrician for assessment of scar dehiscence, in which case the patient may require cesarean section
Substance abuse is the use of illicit substances. It can be categorized in three stages:

### Use
- Taking low, infrequent doses of illicit substances for experimentation or social reasons.
- Damaging consequences are minor or rare.

### Abuse
Persistent or repeated use of psychoactive substance for more than one month, despite the persistence or recurrence of adverse social, occupational, psychological or physical effects.

### Dependence
If three or more of the following criteria are met continuously for one month or repeatedly in a given year:
- Abandonment of social, occupational or recreational activities.
- Continued substance use in spite of knowledge of social, psychological or physical problems caused/exacerbated by taking them.
- Substance is taken to relieve or avoid withdrawal symptoms.
- Presence of withdrawal symptoms.
- Persistent desire or one or more unsuccessful attempts to control substance use.
- Substance taken in larger amount or over a longer period.
- Significant time spent recovering from the after effects.

### Signs and Symptoms of Substance abuse
- Disorientation, euphoria, sedation and agitation
- Hallucination, hypertension, tachycardia, inflamed nasal mucosa, track marks and pupil abnormalities
- Unusual infections such as cellulites / hepatitis

### Psychoactive substance
<table>
<thead>
<tr>
<th>Psychoactive substance</th>
<th>Example</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opiates</td>
<td><em>Heroin, Morphine, Methadone and Codeine</em></td>
<td>Euphoria, relaxation, mood elevation, drowsiness and respiratory depression</td>
</tr>
<tr>
<td>Depressants</td>
<td><em>Alcohol, Barbiturates, Diazepam</em></td>
<td>Euphoria, relaxation, mood elevation, drowsiness, mood volatility, respiratory depression and impaired coordination</td>
</tr>
<tr>
<td>Stimulants</td>
<td><em>Nicotine (tobacco), Cocaine, Caffeine</em></td>
<td>Euphoria, alertness, sense of well being, suppression of fatigue and hunger, increased sexual arousal, increased pulse and blood pressure, tremor, insomnia, psychosis, cardiac arrest, abruption placentae, fetal growth retardation</td>
</tr>
<tr>
<td>Cannabinoids</td>
<td><em>Marijuana, Hashish</em></td>
<td>Euphoria, relaxation, altered perception, sexual arousal, increased appetite, disorientation, impaired judgment, in-coordination.</td>
</tr>
</tbody>
</table>
Alcohol use in pregnancy

- Ethanol crosses the placenta and the fetal blood brain barrier freely.
- It causes toxicity both directly and indirectly by its metabolites.
- Heavy drinking may be associated with mental retardation, abortion and stillbirth.
- Alcohol is excreted in breast milk.
- Drinking alcohol during breastfeeding may have detrimental effect on baby’s motor development.

Fetal alcohol syndrome

- It is the congenital syndrome involving a triad of Growth Retardation, Facial abnormalities, and Central nervous system dysfunction.
- Daily consumption of 1-2 ounces of absolute alcohol (moderate to heavy drinking) may be related to Fetal alcohol syndrome.
- The most common abnormalities are:
  - **Prenatal and Postnatal growth deficiency:** Decreased birth weight, length and head circumference.
  - **CNS involvement:** Small brain size, brain malformations, functional deficit such as mental retardation, delayed motor development, poor coordination, tremulousness, behavioral disturbances, hyperactivity and poor attention span.
  - **Facial dysmorphology:** Shortened palpebral fissure (in more than 90% of affected children); short upturned nose; hypoplastic maxilla; thinned upper lip.
  - **Congenital heart defects.**

Risk of Fetal alcohol syndrome

- The threshold dose of alcohol (the point at which congenital anomalies are induced) is unknown.
- There is no safe level of alcohol use in pregnancy. It is safest not to consume any amount of alcohol during pregnancy.
- Early exposure: Critical period for facial dysmorphology is around the time of conception.
- Late exposure: Exposure late in gestation or in small quantities may result in isolated effects such as learning or behavioral disorders.
- Heavy alcohol consumption: (more than 3 oz. of absolute alcohol or six drinks daily) is associated with some or all of the features of Fetal alcohol syndrome.
  - Approximately 30% infants born to chronic alcoholic mother have fetal alcohol syndrome
  - 32 % risk of congenital anomalies in infants
  - 2.7 times increased risk of Intrauterine growth retardation (IUGR)

Tobacco smoking during pregnancy

Maternal complications

**Women who smoke prior to pregnancy have**
- About twice the likelihood to experience a delay in conception.
- Approximately 30% higher chances of infertility.

**Women who smoke during pregnancy**
- Have greater risk of ectopic pregnancy.
- Have about twice the likelihood to experience premature rupture of membranes (PROM), placental abruption, and placenta previa during pregnancy.
- Increased risk of spontaneous abortion and breakthrough bleeding.
- Smokers are more likely to have complications during the birth.
Fetal or neonatal complications in babies born to women who smoke during pregnancy

- Have about 30% higher probability of being born prematurely.
- Smoking during pregnancy is estimated to account for 20 to 30 percent of low-birth weight babies (less than 2500 grams), increasing their risk for illness or death. Maternal smoking has been reported to cause an average decrease in birth weight of 150–200 gm.
- Babies born with a lower than average birth weights are at more risk of infection and other health problems.
- Is a major risk factor for Sudden Infant Death Syndrome (SIDS).

Second hand smoke

Exposure to second-hand smoke during pregnancy can be just as detrimental to a developing fetus as primary exposure through maternal smoking.

Pregnancy and Tobacco chewing

- Smokeless (spit) tobacco contains nicotine.
- The amount of nicotine absorbed is usually more than the amount delivered by a cigarette.
- Overall, people who dip or chew receive about the same amount of nicotine as regular smokers.

Important

If smoking is stopped in the first 3 months of pregnancy, the risk of having a low-weight baby will be similar to that of a non-smoker.

Other substances abuse in pregnancy

Cocaine

- Cocaine can be smoked as ‘crack’, can be taken intranasally or injected intravenously.

Pharmacological effects

- Produces complex cardiovascular effects
- Increases CNS irritability
- Maternal and fetal vasoconstriction and tachycardia and stimulation of uterine contraction

Complications

<table>
<thead>
<tr>
<th>Factors</th>
<th>Complication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstetric</td>
<td>Possible increase in spontaneous abortion</td>
</tr>
<tr>
<td></td>
<td>Increased risk of</td>
</tr>
<tr>
<td></td>
<td>• Preterm labor and delivery</td>
</tr>
<tr>
<td></td>
<td>• Intrauterine fetal demise</td>
</tr>
<tr>
<td></td>
<td>• Fetal distress</td>
</tr>
<tr>
<td></td>
<td>Intrauterine growth restriction</td>
</tr>
<tr>
<td></td>
<td>Abruptio placentae</td>
</tr>
<tr>
<td></td>
<td>Increased incidence of premature rupture of membranes</td>
</tr>
<tr>
<td></td>
<td>Meconium stained amniotic fluid</td>
</tr>
<tr>
<td>Congenital anomalies in fetus</td>
<td>Fetal microcephaly</td>
</tr>
<tr>
<td></td>
<td>Nonduodenal intestinal atresia</td>
</tr>
<tr>
<td></td>
<td>Limb reduction defects</td>
</tr>
<tr>
<td></td>
<td>Genito-urinary tract anomalies</td>
</tr>
<tr>
<td></td>
<td>Cerebral infarction in utero</td>
</tr>
</tbody>
</table>
**Neonatal and infant behavioral disturbances**
- Eg. Sudden infant death syndrome

**Learning & behavioral problems in child**
- May sometimes contribute to subtle learning and behavioral problems, including language delays and attention problems.

---

**Marijuana**

**Maternal complications**
- May be associated with increased perinatal mortality, preterm delivery, PROM and delivery of low birth weight in infant.

**Fetal or neonatal complications**
- Infants are likely to undergo withdrawal-like symptoms, including excessive crying and trembling.
- Children are more likely to have subtle problems that affect their ability to pay attention.

**Heroine**
- Poor nutritional status may be present in Heroin addicts.
- No increased risk of congenital anomalies has been seen but is often consumed with other drugs which are known to cause congenital anomalies.
- Increased incidence of Intrauterine growth retardation, premature delivery, stillbirth, pre-maturity, low birth weight, perinatal death and premature rupture of the membranes.
- Babies of heroin users often suffer from serious health problems during the newborn period, including
  - Breathing problems
  - Mild developmental delay
  - Withdrawal symptoms after birth, including fever, sneezing, trembling, irritability, diarrhea, vomiting, continual crying and, occasionally, seizures.
  - Increased risk of sudden infant death syndrome (SIDS).
- Children exposed to heroin before birth are at increased risk of learning and behavioral problems.

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**Management**

All women during pregnancy must be educated and counseled about the risks associated with drug use and its effect on mother and developing infant. This is particularly important in relation to alcohol use, active tobacco use and passive exposure to tobacco smoke.

All women must be asked directly about exposure to abusive substances, in past and currently continuing.

**Woman giving history of continuing substance abuse**

Provide multidisciplinary approach including social workers, counselors and other health care staff

- Nutritional Advice
- Homoeopathic treatment
- Referral to de-addiction centre
### Homoeopathic management

#### Objective of homoeopathic management (along with counseling)
- Management of the addiction of the substance and prevention of their bad effects in both mother and growing fetus
- Management of the bad effects of substance abuse in the pregnant woman

#### Management of the addiction of the substance and prevention of their bad effects (in both mother and growing fetus)

<table>
<thead>
<tr>
<th>Abusive substance</th>
<th>Medicines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ALCOHOL</strong></td>
<td></td>
</tr>
<tr>
<td><em>Desire for alcohol</em></td>
<td>Arsenic album, Asarum, Capsicum, Crotalus horridus, Hepar sulphuris, Lachesis, Nux vomica, Sulphur, Sulphuric acid</td>
</tr>
<tr>
<td><em>Alcoholism, during and after pregnancy</em></td>
<td>Nux vomica</td>
</tr>
<tr>
<td><em>Desire for Beer</em></td>
<td>Aconitum napellus, Nux vomica, Sulphur</td>
</tr>
<tr>
<td><em>Desire for Brandy</em></td>
<td>Arsenic album, Asarum, Capsicum, Crotalus horridus, Hepar sulphuris, Lachesis, Nux vomica, Sulphur</td>
</tr>
<tr>
<td><em>Desire for Whiskey</em></td>
<td>Lac caninum, Sulphur</td>
</tr>
<tr>
<td><em>Desire for Wine</em></td>
<td>Calcarea carbonica, Cantharis, Lycopus, Phosphorus, Sulphur</td>
</tr>
<tr>
<td><strong>COCAINE</strong></td>
<td></td>
</tr>
<tr>
<td><em>Addiction of Cocaine</em></td>
<td>Avena sativa, Cocaine, Nux vomica</td>
</tr>
<tr>
<td><strong>HEROINE</strong></td>
<td></td>
</tr>
<tr>
<td><em>Craving for Heroine</em></td>
<td>Avena sativa, Ipecac, Nux vomica, Opium</td>
</tr>
<tr>
<td><strong>NARCOTICS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>TOBACCO</strong></td>
<td></td>
</tr>
<tr>
<td><em>Addiction of Nicotine</em></td>
<td>Avena sativa, Caladium, Ignatia, Nicotinum, Nux vomica, Tabaccum</td>
</tr>
<tr>
<td><em>Tobacco abuse</em></td>
<td>Caladium, Abies nigra, Arsenic album, Gelsemium, Ignatia, Ipecac, Nicotinum, Nux vomica, Plantago, Sepia, Spigelia</td>
</tr>
<tr>
<td><em>Desire for smoking</em></td>
<td>Caladium, Tabaccum, Arsenic album, Asarum, Calcarea phosphoricum, Camphor, China, Glonoine, Nicotinum, Nux vomica, Phosphorus, Spigelia, Staphisagria</td>
</tr>
</tbody>
</table>
Management of the bad effects of substance abuse in the pregnant woman

<table>
<thead>
<tr>
<th>Substance abused</th>
<th>Medicines</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEROINE</td>
<td>Avena sativa, Ipecac, Nux vomica, Opium, Chamomilla, Lachesis, Passiflora</td>
</tr>
<tr>
<td>Ailments from Heroine addiction</td>
<td></td>
</tr>
<tr>
<td>NARCOTICS</td>
<td>Avena sativa, Nux vomica, Opium</td>
</tr>
<tr>
<td>Ailments from Narcotics abuse</td>
<td></td>
</tr>
<tr>
<td>TOBACCO</td>
<td>Caladium, Nux vomica, Arsenic album, Ipecac, Lachesis, Lycopodium, Nicotinum, Phosphrus, Plantago, Thuja</td>
</tr>
<tr>
<td>Ailments from Tobacco abuse</td>
<td></td>
</tr>
<tr>
<td>Bad effects from chewing tobacco</td>
<td>Arsenic album, Nux vomica, Plantago, Sepia, Veratrum album</td>
</tr>
</tbody>
</table>

Antidotes for Tobacco abuse

<table>
<thead>
<tr>
<th>Indications</th>
<th>Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive nausea and vomiting</td>
<td>Ipecac</td>
</tr>
<tr>
<td>Bad effects of tobacco chewing</td>
<td>Arsenic album</td>
</tr>
<tr>
<td>Gastric symptoms next morning after waking</td>
<td>Nux vomica</td>
</tr>
<tr>
<td>Palpitation, tobacco heart</td>
<td>Phosphorus</td>
</tr>
<tr>
<td>Annoying hiccough from tobacco chewing</td>
<td>Ignatia</td>
</tr>
<tr>
<td>Tobacco toothache</td>
<td>Clematis, Plantago</td>
</tr>
<tr>
<td>Neuralgic affection of right side of face, dyspepsia, nervousness</td>
<td>Sepia</td>
</tr>
<tr>
<td>Occipital headache and vertigo from excessive use especially smoking</td>
<td>Gelsemium</td>
</tr>
</tbody>
</table>
1. What is gestational diabetes? What is the first step in screening for Gestational Diabetes Mellitus (GDM)?

2. What are the maternal and fetal complications associated with alcohol consumption during pregnancy?

3. What would be your advice to the pregnant woman who has tested positive for pulmonary tuberculosis?

4. What would be your advice to the pregnant woman who is HIV positive and has delivered a baby who is HIV -ve? Should she breastfeed her baby?