Medical Disorders in Pregnancy

The common medical disorders are:

- Hypertension
- Late Pregnancy Haemorrhage
- Anaemia
- Heart Disease
- Diabetes
- Malaria and other infections
- Epilepsy
Pregnancy Induced Hypertension (Pre-eclampsia)

- Occurs mainly, but not exclusively in nulliparae.
- Appears usually after the 20th week of pregnancy.
- It is mild when diastolic blood pressure is >90 mm Hg and no proteinuria.
- Moderate when diastolic blood pressure is > 100 mm Hg and proteinuria of 500 mg/l or more.
- Severe when diastolic blood pressure is >110 mm Hg and proteinuria of > 500 mg/l.
Pre-existing Hypertension - 2

- It is unrelated to pregnancy, and may be detected for the first time in pregnancy. It does not regress after delivery.
- Chronic hypertension is a major predisposing factor for pre-eclampsia.
- When pre-eclampsia gets superimposed on chronic hypertension it makes a dangerous combination.
Pre-eclampsia is a major cause of maternal and fetal mortality.

The main fetal risks are impaired growth, placental abruption and prematurity.

Women with diastolic pressure above 100 mm Hg and proteinuria despite adequate antihypertensive treatment have a 3 to 7 times increased risk of bad prognosis.
Management of pregnancy induced hypertension

- Ideal approach to management is to detect it early.
- Bed rest is central to management under specialist care so referral is important on diagnosis.
- Anti-hypertension drugs help to protect the mother against the effects of hypertension. They are used when blood pressure rises in spite of bed rest.
- Ultimate treatment is delivery.
Pre-eclamptic toxaemia

Mild pre-eclamptic toxaemia.

Blood pressure of 140/90 mm Hg or above with no proteinuria. Blood pressure returns to normal by 6 weeks after delivery.

Moderate pre-eclamptic toxaemia

Diastolic blood pressure above 100 mm Hg, and proteinuria of 500 mg/L

Severe pre-eclamptic toxaemia

Diastolic blood pressure >110 mm Hg and proteinuria > 500 mg/L
Drugs for hypertension in pregnancy

- Methyldopa (250 - 1000 mg) is safe.
- Beta-blockers (atenolol 50-100 mg daily or propanolol 80 -160 mg daily) are also safe.
- Severe hypertension requires urgent treatment either with beta-blockers or hydralazine given intravenously.
- The ultimate treatment of pregnancy induced hypertension is delivery.
The placental bed is the site of bleeding. Any separation of the placenta before delivery leads to bleeding.

If the placenta is implanted in the upper segment of the uterus the bleeding is called abruption.

If the placenta is in the lower segment of the uterus it is called placenta previa.

Whatever the case, the important factor is the amount of placental separation from its bed, the disturbance in the circulation, and by how much placental exchange is affected.
Antepartum Haemorrhage - 2

- Antepartum haemorrhage can be life threatening because of shock, disseminated intravascular coagulation and renal failure.

- Patient should be transferred for specialist care with transfusion facilities.
Anaemia - 1

- Iron demand rises from 2 mg/day in the non-pregnant to 3.5 – 4 mg/day
- Blood slide shows hypochromia and microcytes
Folate is now being given to all women attending antenatal clinics often combined with iron to provide 300 – 500 ug of folate.

In proven folate deficiency 5 – 10 mg/day should be given.

The blood slide shows macrocytes.
Sickle cell anaemia

- There is a high risk of complications like pain in bones, chest or abdomen due to small vessel infarction or sequestration of erythrocytes in spleen or liver.
- Risks of maternal and perinatal mortality are much raised.
- Such cases are best managed in specialist units.
Neural tube defect

- Folate deficiency in the pregnant woman can give rise to neural tube defect in the foetus.
Heart Disease

- Normally cardiac output increases by up to 40% by mid-pregnancy staying steady until labour, and then increases further.

- Normally in labour up to a litre of blood is shunted from the uterus into the general circulation. This can cause cardiac overload in heart disease.
Heart Disease

- Commonest cause is previous rheumatic illness. Also congenital cardiac lesions may be present.
- In normal pregnancy cardiac output is increased by 40% by mid-pregnancy and staying steady until labour when it increases further.
- Normally in labour up to 1 litre of blood is shunted from the uterus into the general circulation and this may compromise cardiac function causing pulmonary oedema and breathlessness.
- Such cases are best sent to specialist units.
Diabetes

Criteria for diagnosis are:

- Random venous plasma glucose level $> 11$ mmol/l or fasting levels $> 8$ mmol/l.
- Careful management of diabetic pregnant women should begin with first antenatal visit.
- The outcome of pregnancy depends on how effective the control of diabetes has been from conception.
- Tight control with plasma glucose levels ideally between $5.6 - 6.7$ mmol/l is the aim.
Gestational diabetes is diagnosed when a woman develops abnormal glucose tolerance for the first time in pregnancy. Some such women will remain diabetic after the pregnancy.

Screening for gestational diabetes should be done on all women who are overweight (> 100 kg); have given birth to a large baby (> 4500 g)
Epilepsy

- Approximately 3-4 out of 1000 pregnant women have epilepsy.
- Most anti-epileptic drugs have teratogenic properties.
- Also epileptic women have an increased risk of having babies with malformation even without treatment.
A number of infections in the mother can affect the growing foetus. These vary from parasitic infections like malaria and toxoplasma to bacterial like syphilis and viral like rubella and HIV.
Infection - 1

- Malaria. Placental infection in endemic areas gives rise to low birth weight.
- Toxoplasmosis. Congenital infection presents with thrombocytopenia, jaundice, hepatosplenomegaly, convulsions. Referral for specialist care is necessary.
- Rubella. Infection early in pregnancy results in a number of defects in the foetus.
Infection - 2

- HIV. The risk of mother-to-child transmission is 30%; furthermore transmission through breast milk can occur in 15%. Referral to specialist unit for management is necessary.

- Varicella. Risk of congenital varicella syndrome is 2 per cent in first trimester. Risk is less later in pregnancy. If the mother gets varicella around the time of pregnancy the baby is at risk of life threatening illness.

- Herpes simplex. The risk of transmission to the baby is high when genital lesions are present in the mother. The disease may be localised to eye, mouth or generalised causing pneumonitis or meningoencephalitis with high mortality.

- Hepatitis B. Risk of transmission is high in case of mothers with the e antigen in blood. Protection with hepatitis B immunoglobulin and vaccine is effective.