SNS COLLEGE OF ALLIED HEALTH SCIENCES

SNS Kalvi Nagar, Coimbatore - 35

Affiliated to Dr MGR Medical University, Chennai

DEPARTMENT OF B.SC PHYSICIAN ASSISTANT

COURSE NAME: OBSTETRICS/ GYNECOLOGY

II YEAR

UNIT : I

TOPIC : PREGNANCY INDUCED HYPERTENSION

CASE HISTORY

19 Yrs old Primi Gravid mother from socio economic Background presented with 8 Months of amenorrhoea, swelling over the legs since 8 days. There is no history of Headache/ vomiting/ Visual disturbance.

No History of Loss of fetal movements/ No History of convulsions .

Obstetric History : Married one and half years back, G1P0L0A0

PAST HISTORY:

No history of Hypertension, Diabetes

Received 2 doses of Tetanus.

Pulse: 90/mt

BP: 140/90 mmHg

Mean arterial Pressure is 106mm

INTRODUCTION

- Hypertension is the one of the most common complication during pregnancy.
- Increased maternal and perinatal mortality and morbidity.
- It is a sign of an underlying pathology that may be pre – existing or appears for the first time during pregnanacy that is also called as TOXEMIA OF PREGNANCY.

HYPERTENSION

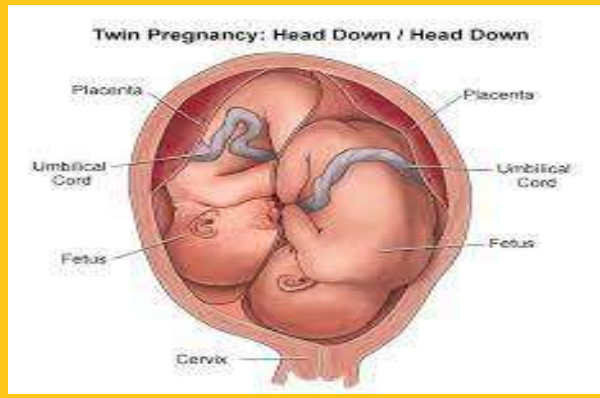
Blood pressure of 140/90 mmHg or more or an increase of 30 mmHg in systolic and /or 15 mmHg in diastolic blood pressure over the pre- or early pregnancy level.

RISK FACTORS FOR HYPERTENSION IN PREGNANCY

- Nulliparity
- Pre-eclampsia in a previous pregnancy
- Age >40 years or <18 years
- Family history of pregnancy-induced hypertension
- Chronic hypertension
- Anti-phospholipid antibody syndrome or inherited thrombophilia

RISK FACTORS FOR HYPERTENSION IN PREGNANCY(cont.)

- Vascular or connective tissue disease
- Diabetes mellitus(pre-gestational and gestational)
- Multi-fetal gestation
- High body mass index



- Hydrops-fetails
- Unexplained fetal growth restriction

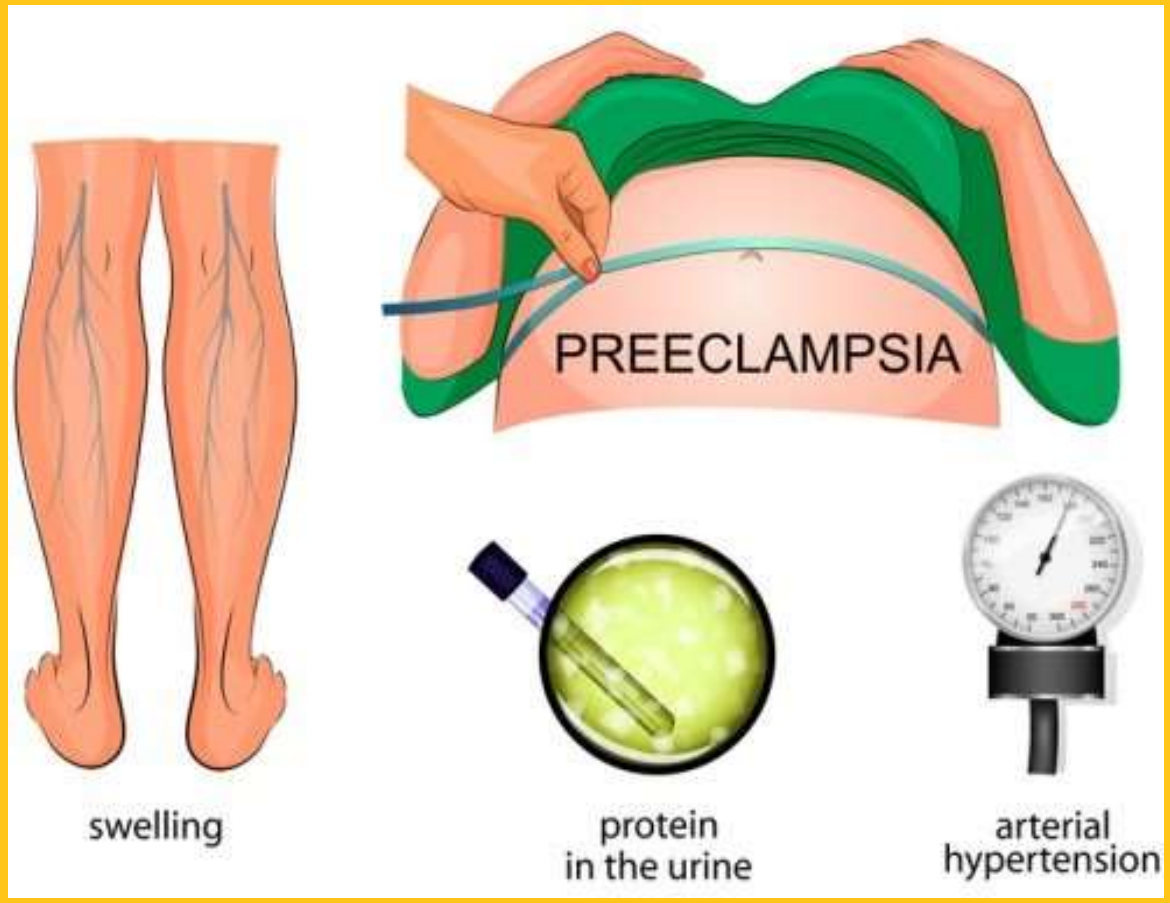
CLASSIFICATION

- Chronic hypertension
- Pre-eclampsia
- Chronic hypertension with superimposed pre-eclampsia and eclampsia
- Gestational hypertension
- Transient hypertension

CLASSIFICATION(cont.)

- HELLPsyndrome-
- Hemolysis(H)
- Elevated liver enzymes(EL)
- Low platelet count(LP)
- Eclampsia
- Superimposed pre-eclampsia or eclampsia
- Proteinuria

PRE-ECLAMPSIA



DEFINITION

It is a multisystem disorder of unknown etiology characterized by development of hypertension to the extent of 140/90 mm ofHg or more with proteinuria after 20th week in a previous normotensive and non-proteinuric women.

PRE-DISPOSING FACTORS

- Primigravidae more than multi-gravidae
- Pre-existing hypertension
- Previous pre-eclampsia
- Family history of pre-eclampsia
- Hyperplacentosis i.e. excessive chronic tissues as in hydatidiform mole, multi pregnancy, uncontrolled diabetes mellitus and foetal haemolytic diseases
- Obesity
- New paternity
- Thrombophilias

PATHOPHYSIOLOGY

- The uteroplacental bed
- Immunological factor
- Genetic factor
- Renin-angiotensin system
- Atrial natriuretic peptide(ANP)
- Prostaglandins
- Neutrophils

CLINICAL FEATURES

SYMPTOMS:

Mild:

- Slight swelling over the ankle
- Gradually swelling may be extend to the face, abdominal wall, vulva even the whole body

Alarming:

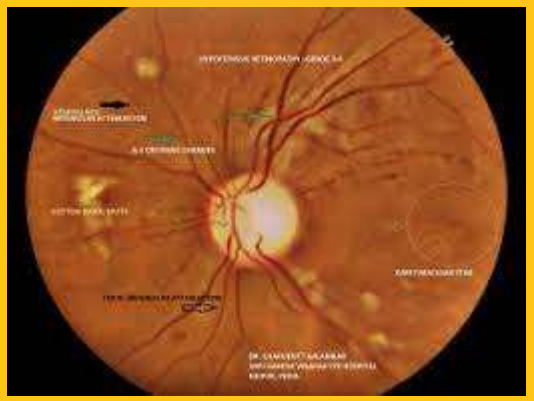
- Headache
- Disturbed sleep
- Diminished urinary output
- Epoigastric pain
- Eye symptoms-blurring, scotomata, dimness of vision or at times complete blindness. Vision usually regained within 4-6 weeks following delivery

Signs :

- Abnormal weight gain
- Rise of blood pressure
- Edema
- There is no manifestation of chronic cardiovascular or renal pathology
- Pulmonary edema
- Abdominal examination my reveal evidences of chronic placental insufficiency such as scanty liquor or growth retardatior of the fetus

INVESTIGATION

- Urine :
- 24 hours urine collection forv proteiun measurement isdone
- Urine become solid on boiling (10-15g/l)
- A few hyaline cast, ephithelial cells or few red cells
- Ophthalmoscopic examinations :
- In severe cases-retinal edema, constriction of arterioles, alteration of normal ration of vein, nicking the veins, hemorrhage.



- Blood cells :
- Serum uric acid level>4-5 mg/dl indicates presences of pre-eclampsia
- Blood urea level remains normal
- Abnormal coagulation profile
- Raised hepatic enzyme levels
- Antenatal fetal monitoring :
- Daily fetal kick count
- USG of fetal growth
- Liquor pockets
- Cardiotocography
- Umbilical artery flow velocimetry
- Bio-physical profile

COMPLICATIONS

- Immediate
  Material :
- During pregnancy :

a. Eclampsia (2%)
b. Accidental hemorrhage
c. Oliguria and anuria
d. Dimness of vision even blindness
e. Pre-term labour
f. HELLP syndrome
g. Cerebral hemorrhage
h. Acute respiratory distress syndrome (ARDS)

- During labour :

a. Eclampsia (2%)
b. Post partum hemorrhage (PPH)

- Puerperium :

a. Eclampsia
b. Shock
c. sepsis

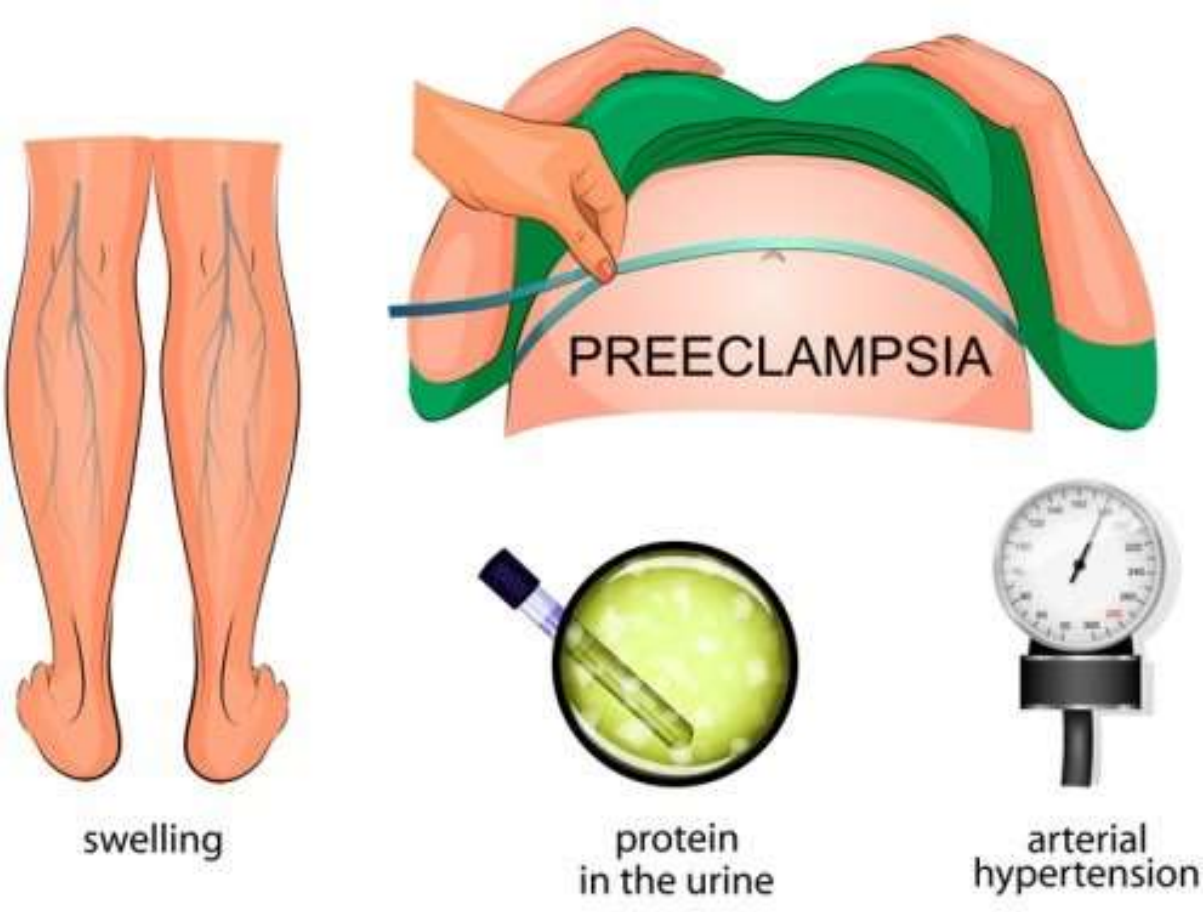
Fetal :

a. Intrauterine death (IUD)
b. Intrauterine growth retardation(IUGR)
c. Asphyxia
d.Prematurity

Remote :

e. Residual hypertension
f. Recurrent pre-eclampsia
g. Chronis renal disease
h. Risk of placental abruption

MANAGEMENT

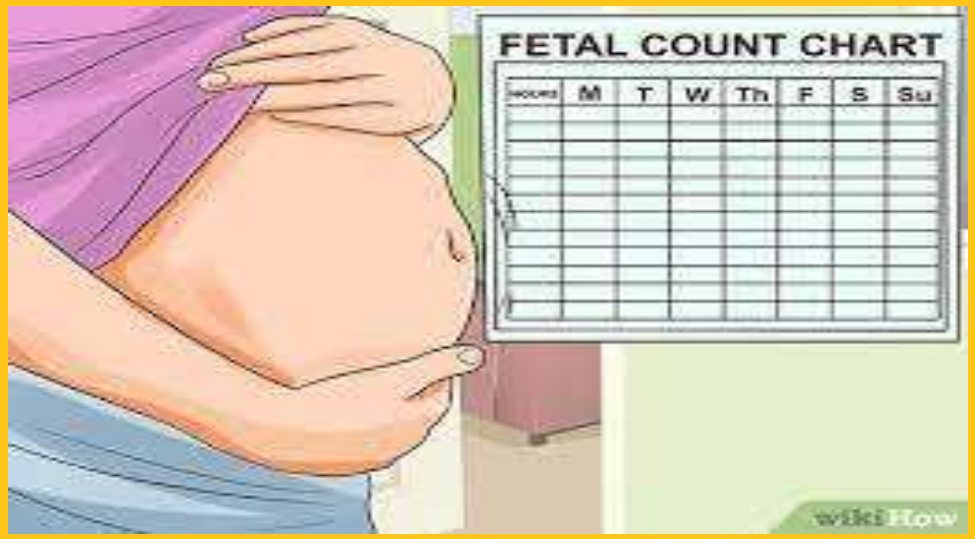

PREECLAMPSIA
swelling
protein
in the urine
arterial
hypertension

GENERAL MAESURES

Observation :

- Maternal
- Blood pressure twicw daily
- Urine volume and proteinuria daily
- Oedema daily
- Body weight twicw weekly
- Fundus oculi once weekly
- Blood picture including platelet count, liver and renal functions particularly serum uric acid on admission

- Fetal
- Daily foetal movement count
- Serial sonography
- Non-stress and stress test if needed



MEDICAL TREATMENT

- Antihypertensives :
- Decrease the maternal cerebral and cardiovascular complications but do not affect the foetal outcome
- Alpha-methyl-dopa :
- It reduces the central sympathetic drive
- Hydralazine
- Labetalol
- Nifedipine
- Sodium nitroprusside

THANK YOU