SREE BALAJI MEDICAL COLLEGE AND HOSPITALS
CHROMPET, CHENNAI,600044

DEPARTMENT OF OBSTETRICS & GYNAECOLOGY AND MEDICAL EDUCATIONAL UNIT

CORDIALLY INVITES YOU FOR THE SYMPOSIUM ON

HYPERTENSIVE DISORDERS IN PREGNANCY

MODERATORS:

DR GEETHALAKSHMI A, DNB,DGO
ASSOCIATE PROFESSOR, OBG

DR S R VEENA, MS, DNB, CIMP
ASSISTANT PROFESSOR, OBG

PRESENTERS: FINAL YEAR MBBS(2021-2022)

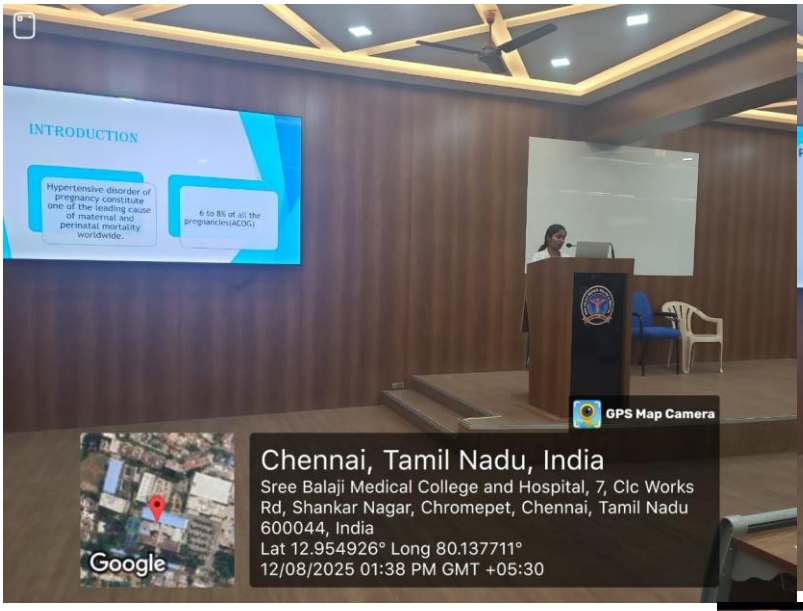
K. RANJITH
JOTHIKA.A
KOLA PRIYANKA
SATHVEEGA SADANANDAM
CHANDRU. R

On Tuesday , 12 August 2025

01.00-04.00 PM | 4th floor ,Lecture hall 4
College Building
03:00 pm to 04:00 pm - Post test

DR. T.S. MEENA, MD(OBG)
PROFESSOR and HOD,
Department of OBG, SBMCH

DR.P.SASIKUMAR,MS,PhD
PROFESSOR, DEAN ,SBMCH


INTRODUCTION
Hypertensive disorder of pregnancy constitute one of the leading cause of maternal and perinatal mortality worldwide.
6 to 8% of all the pregnancies(ACOG)
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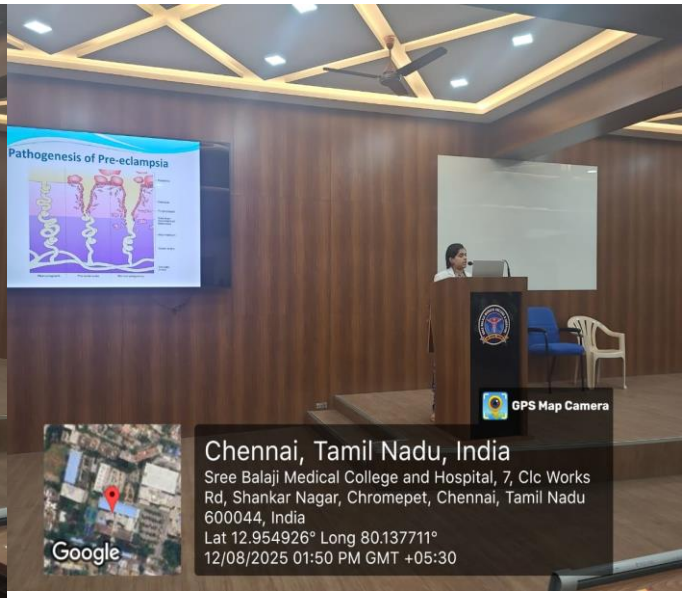
Pathogenesis of Pre-eclampsia
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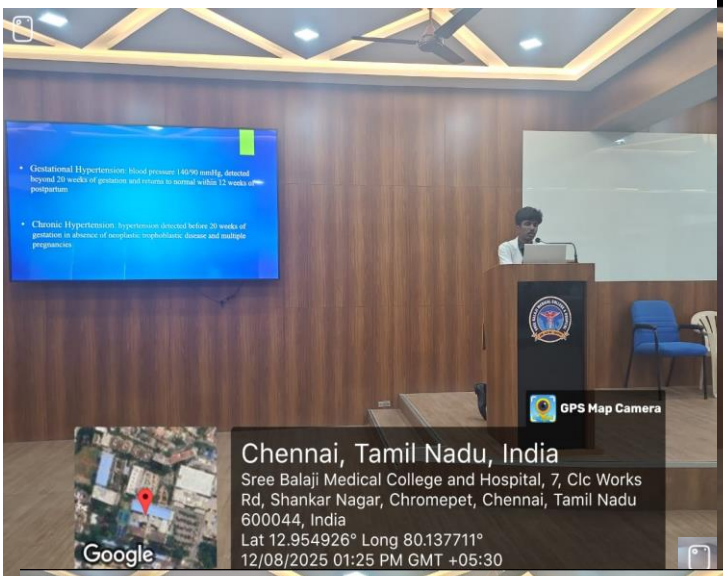
Gestational Hypertension: blood pressure 140/90 mmHg, detected beyond 20 weeks of gestation and returns to normal within 12 weeks of postpartum
Chronic Hypertension: hypertension detected before 20 weeks of gestation in absence of neoplastic trophoblastic disease and multiple pregnancies
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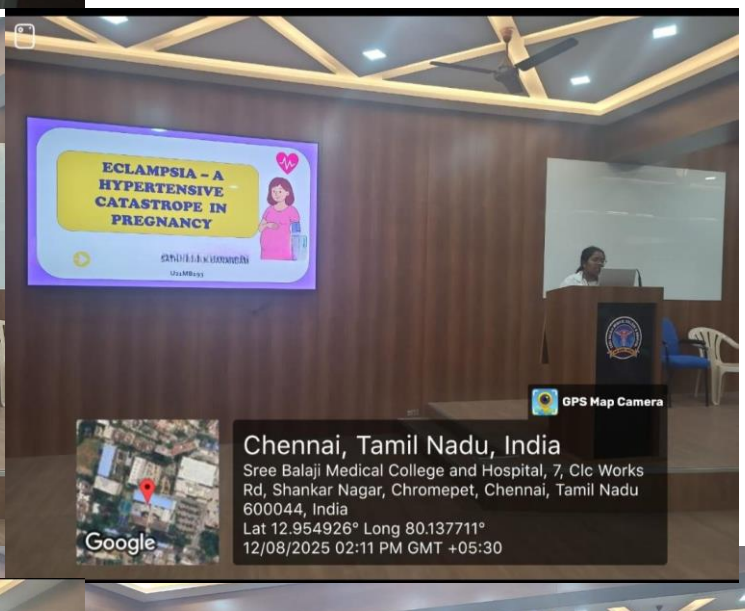
ECLAMPSIA – A HYPERTENSIVE CATASTROPE IN PREGNANCY
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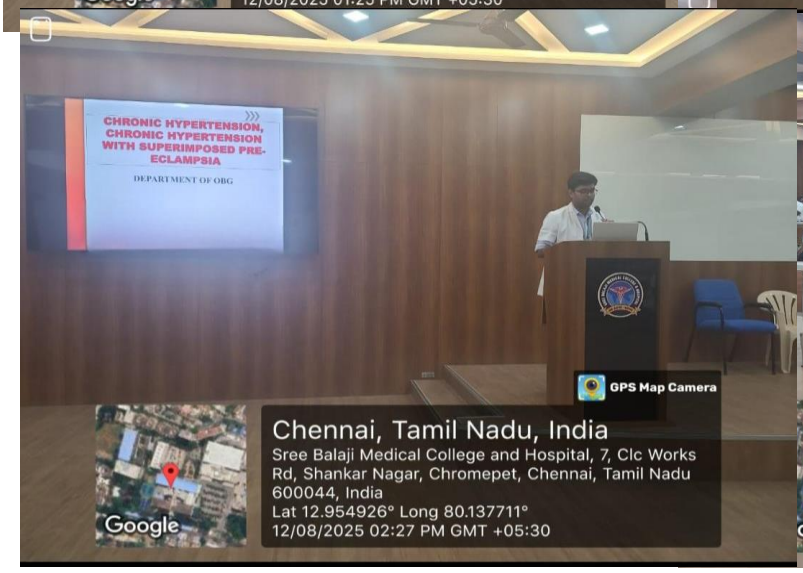
CHRONIC HYPERTENSION, CHRONIC HYPERTENSION WITH SUPERIMPOSED PRE-ECLAMPSIA
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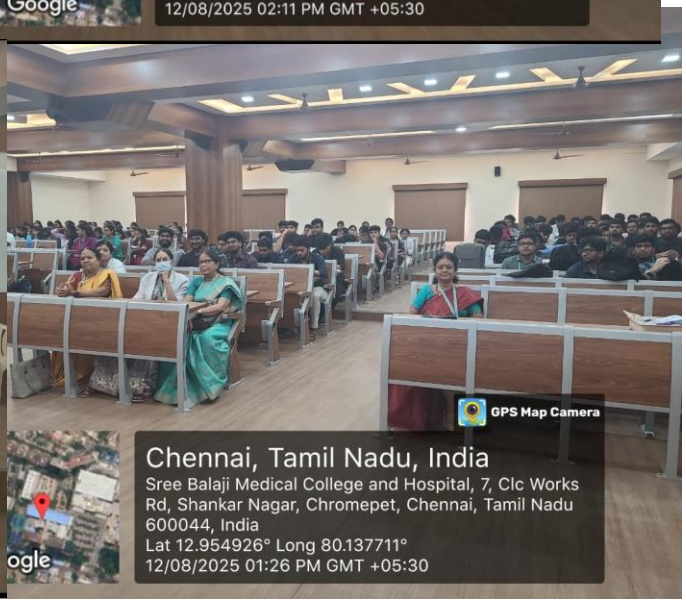
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SUMMARY - HYPERTENSIVE DISORDERS IN PREGNANCY

PRESENTER 1:

RANJITH K- INTRODUCTION OF HYPERTENSIVE DISORDERS IN PREGNACY

- Hypertensive disorders in pregnancy are a major cause of maternal and fetal complications worldwide.
- They include conditions like gestational hypertension, chronic hypertension, preeclampsia, and chronic hypertension with superimposed preeclampsia
- These disorders can lead to serious outcomes such as maternal organ damage, preterm birth, and fetal growth restriction.
- Release of antiangiogenic factors, inflammatory cytokines, and oxidative stress, leads to damage of maternal blood vessels
- Additional contributing factors include genetic predisposition, immune system abnormalities, and maternal risk factors like obesity, diabetes, or chronic hypertension.
- etiopathogenesis include:

i. Abnormal trophoblast invasion of the uterine spiral arteries.

ii. Inadequate remodeling of these arteries, leading to high-resistance blood flow.

iii. Resulting placental ischemia and hypoxia.

iv. Release of toxic factors into the maternal circulation.

v. Systemic endothelial dysfunction, causing high blood pressure and organ damage.

PRESENTER 2:

JOTHIKA K – GESTATIONAL HYPERTENSION

Gestational hypertension is defined as new-onset systolic blood pressure ≥140 mmHg or diastolic ≥90 mmHg on two occasions 4–6 hours apart, occurring after 20 weeks of gestation in previously normotensive women, without proteinuria or severe features, and resolving within 12 weeks postpartum. According to ACOG, up to 50% of cases may progress to preeclampsia, especially if diagnosed before 32 weeks. It is classified alongside preeclampsia/eclampsia, chronic hypertension, and chronic hypertension with superimposed preeclampsia.

Diagnosis requires careful differentiation from preeclampsia through investigations such as urine albumin dipstick, 24-hour urine protein, protein–creatinine ratio, CBC, peripheral smear, LDH, liver and renal function tests, and coagulation profile when indicated. Fetal monitoring includes auscultation at every visit and ultrasound every 2–4 weeks (every 2 weeks in severe cases), with CTG if clinically indicated.

Management depends on severity. For mild hypertension, antihypertensives (labetalol, methyldopa, nifedipine) are initiated if BP remains above 140/90 mmHg, targeting ≤135/85 mmHg, with BP checks once or twice weekly. Severe hypertension (≥160/110 mmHg) warrants admission, urgent pharmacologic control, BP monitoring every 15–30 minutes until stabilized, and frequent proteinuria testing. Blood tests are repeated weekly, with daily urine checks if admitted. Placental growth factor testing may help rule out preeclampsia.

Delivery is planned at 39+6 weeks if BP is controlled, fetal monitoring is reassuring, and no preeclampsia develops. In severe cases, delivery occurs once fetal maturity is reached. Postpartum follow-up is essential to confirm BP normalization and detect complications.

Red flags indicating possible progression to preeclampsia include new-onset proteinuria, headache, visual disturbance, vomiting, epigastric pain, abnormal LFT/LDH, thrombocytopenia, fetal growth restriction, oligohydramnios, hemolysis, pulmonary edema, or cyanosis. Early recognition, close monitoring, appropriate antihypertensive use, and timely delivery are key to preventing maternal and fetal complications.

PRESENTER 3:

KOLA PRIYANKA: PRE-ECLAMPSIA

- Pre-eclampsia is a multi-organ disorder characterised by the development of hypertension and significant proteinuria and/or evidence of one of the maternal organ dysfunctions after 20 weeks of gestation.
- Pre-eclampsia without severe features: Systolic BP is greater than 140 mmHg and Diastolic BP is greater than 90 mmHg on two successive measurements 4-6 hours apart along with proteinuria. Pre-eclampsia with severe features: Systolic BP ~ 160 mmHg, Diastolic BP ~ 110 mm Hg, Proteinuria, Thrombocytopenia (<100,000/ML), Impaired liver function, Progressive renal insufficiency, Pulmonary oedema, new-onset cerebral or visual symptoms.

- Signs and symptoms include Persistent maternal headache, Visual disturbance, Vomiting, Epigastric pain, Thrombocytopenia, Impaired liver function test, Presence of pulmonary oedema or cyanosis, Reduced urine output, Evidence of haemolysis.
- Risk Factors: First pregnancy, Multiple gestation, History of preeclampsia, Chronic hypertension, diabetes, kidney disease, Obesity, Advanced maternal age (>35).
- Investigations: Proteinuria: ≥300 mg in a 24-hour urine sample or protein/creatinine ratio ≥0.3; Organ dysfunction: includes elevated liver enzymes, low platelet count, renal insufficiency, pulmonary oedema, or cerebral/ visual disturbances.
- Management: Antihypertensives like oral methyldopa, labetalol and nifedipine with maternal and fetal monitoring; Mild Pre-eclampsia to be delivered at 37 completed weeks and Severe Pre-eclampsia to be delivered after 34 completed weeks. Magnesium sulphate for convulsion prophylaxis.
- Complications: HELLP syndrome, Cerebro sinus thrombosis, Placental abruption, Fetal growth restriction, prematurity.
- Prediction via HDP-Gestosis score and prevention with administration of aspirin 75-150mg earlier than 12 weeks.

PRESENTER 4:

SATHVEEGA SADANANDAM- ECLAMPSIA.

- Eclampsia is a critical hypertensive disorder in pregnancy, defined as new-onset tonic-clonic seizures after 20 weeks of gestation in the absence of other causes such as epilepsy or cerebrovascular disease. In the brain, increased vascular resistance, hypoxia, and edema cause convulsions.

- Seizures progress through premonitory, tonic, clonic, coma, and recovery stages, followed by elevated temperature, blood pressure, and proteinuria.

- Management priorities include seizure control, blood pressure management, delivery, and supportive care. Emergency steps involve placing the patient in the left lateral position, securing the airway, giving oxygen, inserting IV lines, catheterizing the bladder, and monitoring labs.

- Magnesium sulphate is the preferred anticonvulsant, given via Pritchard's or Zuspan's regimen with close monitoring of reflexes, respiration, and urine output; calcium gluconate is the antidote for toxicity. Labetalol is first-line for hypertension; nifedipine is preferred if urine output is low, while hydralazine is avoided in tachycardia.

- Definitive treatment is delivery of the baby and placenta. Postpartum care includes continuing anticonvulsants for 24 hours after the last seizure, tapering antihypertensives, and follow-up at six weeks for persistent hypertension or proteinuria.

- Differential diagnoses include stroke, epilepsy, meningitis, and cerebral venous thrombosis. Maternal complications range from pulmonary edema, renal failure, cerebral edema, and DIC to hepatic rupture and death;

PRESENTER 5:

CHANDRU R - CHRONIC HYPERTENSION, CHRONIC HYPERTENSION WITH SUPERIMPOSED PRE-ECLAMPSIA

Chronic hypertension

Definition:

Hypertension (140/90mm Hg or greater) is documented antecedent to pregnancy (or)Hypertension is detected before 20 weeks of gestation (or)Hypertension that persists long after delivery.

Types:

- Primary
- Secondary

Causes:

- Idiopathic
- Familial
- Obesity
- Vascular, endocrinal and renal diseases.

Risk Factors: Advanced age, obesity.

Clinical Features: asymptotic, headache, dizziness, visual disturbance.

Investigation: CBC, LFT, urinalysis, fundoscopy.

Management: Weight reduction, antihypertensive therapy, low-dose aspirin, periconceptional counselling.

Complications: HELLP syndrome, DIC, IUGR, IUFD.

Chronic Hypertension with superimposed Preeclampsia

Definition:

When a pregnant woman with chronic hypertension develops new onset of proteinuria (or) worsening of BP (or) evidence of end organ dysfunction.

Pathogenesis: abnormal placentation, imbalance between angiogenic and anti-angiogenic factors.

Clinical Features: headache, epigastric pain.

Investigation: CBC, LFT, RFT, coagulation profile, urine for protein.

Management:

- Admission.
- Antihypertensives, steroids, seizure prophylaxis, delivery.

Complications: HELLP syndrome, DIC, IUGR, IUFD.

Thank you