

# Expanded Case Study: Maternity and Obstetric Care

## Patient Background

- **Name:** Mrs. Emily Johnson (pseudonym)
- **Age:** 29 years
- **Gravida/Para:** G2P1 (Second pregnancy, one previous live birth)
- **Gestational Age:** 34 weeks
- **Medical History:**
  - Gestational hypertension in her previous pregnancy
  - Mild anemia
  - No history of diabetes, preeclampsia, or other chronic illnesses
- **Current Medications:**
  - Prenatal vitamins
  - Iron supplements for anemia

## Presenting Complaint

Mrs. Johnson presents to the **obstetric clinic** at 34 weeks of pregnancy with complaints of:

- Persistent headaches
- Swelling in her hands and feet
- Occasional dizziness
- A mild but consistent upper abdominal pain
- Reduced fetal movements over the past 24 hours

She reports feeling generally unwell over the past few days.

## Assessment and Initial Findings

### Physical Examination:

- **Blood Pressure:** 152/98 mmHg (elevated)
- **Heart Rate:** 85 bpm (normal)
- **Respiratory Rate:** 18 breaths per minute (normal)
- **Temperature:** 36.8°C (normal)
- **Urine Dipstick Test:** +2 proteinuria
- **Fundal Height:** 34 cm (appropriate for gestational age)
- **Fetal Heart Rate:** 135 bpm (within normal range)

### Laboratory Results:

- **Complete Blood Count (CBC):** Mild anemia (Hb: 10.5 g/dL)
- **Liver Function Tests:** Elevated liver enzymes (AST/ALT slightly raised)
- **Kidney Function:** Normal creatinine and BUN
- **Platelet Count:** Within normal range

## Diagnosis: Preeclampsia

Mrs. Johnson was diagnosed with **preeclampsia**, a pregnancy-specific hypertensive disorder characterized by elevated blood pressure and proteinuria. If left untreated, it can progress to **eclampsia**, which involves seizures and life-threatening complications.

### Risk Factors for Preeclampsia:

- History of gestational hypertension in a previous pregnancy
- First pregnancy with a new partner
- Maternal age (<20 or >35 years)
- Family history of hypertension
- Obesity and lifestyle factors

## Management and Treatment Plan

### Immediate Hospital Admission

Mrs. Johnson was admitted to the hospital for **close monitoring** and management due to worsening symptoms.

### Medical Management:

1. **Antihypertensive Therapy:**
  - **Labetalol (oral, 100mg BID)** was initiated to control her blood pressure.
2. **Magnesium Sulfate Infusion:**
  - Administered **to prevent seizures (eclampsia)**.
3. **Corticosteroids (Betamethasone):**
  - Given **to accelerate fetal lung maturity** in case early delivery is required.
4. **Fetal Monitoring:**
  - Continuous fetal heart rate monitoring and **biophysical profile (BPP)** to assess fetal well-being.

### Monitoring Plan:

- **Blood pressure checks every 4 hours**
- **Strict urine output monitoring** to assess kidney function
- **Daily fetal movement assessments**

- **Regular Doppler ultrasound scans** to check placental function

## Possible Complications

If preeclampsia worsens, the following complications may occur:

### Maternal Complications:

- **Eclampsia** (seizures)
- **HELLP Syndrome** (Hemolysis, Elevated Liver enzymes, Low Platelet count)
- **Placental Abruption** (premature separation of the placenta)
- **Stroke or Organ Failure** (kidney/liver dysfunction)

### Fetal Complications:

- **Intrauterine Growth Restriction (IUGR)**
- **Preterm Birth**
- **Fetal Hypoxia and Distress**
- **Stillbirth** in severe cases

## Outcome and Delivery Plan

At **36 weeks gestation**, Mrs. Johnson's blood pressure continued to rise (**165/105 mmHg**) despite medication, and she began experiencing severe headaches and blurred vision, indicating **worsening preeclampsia**.

### Decision: Induction of Labor

Given the risk of complications, a **controlled induction of labor** was planned.

1. **Labor Induction with Oxytocin:**
  - Labor was induced using **intravenous oxytocin** to promote contractions.
2. **Epidural Analgesia:**
  - Pain management was provided to ensure a controlled labor process.
3. **Vaginal Delivery Attempt:**
  - After **12 hours of labor**, she **delivered a healthy baby boy** (birth weight: 2.6 kg) vaginally.
4. **Postpartum Monitoring:**
  - **Blood pressure monitoring postpartum** for at least **48 hours** to prevent postpartum eclampsia.

# Postpartum Care and Follow-Up

## Maternal Recovery:

- Blood pressure returned to **130/85 mmHg** within 3 days postpartum.
- Continued **oral antihypertensive therapy** for a short duration.
- Encouraged **breastfeeding** to aid postpartum recovery.
- Educated on signs of **postpartum preeclampsia** (persistent high BP, headaches, visual disturbances).

## Neonatal Care:

- The baby had **normal APGAR scores (8 and 9 at 1 and 5 minutes, respectively)**.
- Monitored for **hypoglycemia and respiratory distress** due to slightly premature birth but remained stable.