



Unmasking the Silent Saboteur: A Case of Gestational Diabetes Mellitus

Introduction

Gestational Diabetes Mellitus (GDM) is defined as glucose intolerance first recognized during pregnancy. It is a common metabolic complication of pregnancy and is associated with increased risks for both the mother and the fetus if not properly managed.

Early detection and appropriate management can significantly reduce complications such as macrosomia, neonatal hypoglycemia, and cesarean delivery. This case report highlights the diagnosis and management of GDM during the third trimester of pregnancy and emphasizes the importance of monitoring and lifestyle interventions.

Case Presentation

Patient Information

A 27-year-old pregnant woman (Gravida 2, Para 1) presented for routine antenatal care at 31 weeks and 3 days of gestation.

For confidentiality purposes, patient name and identifying details have been omitted.

Obstetric History

The patient had a previous term delivery by Lower Segment Cesarean Section (LSCS) due to:

- Delivery of a large baby (macrosomia)
- Elevated maternal blood sugar levels during the previous pregnancy.

Current Pregnancy

During the current pregnancy, routine screening for gestational diabetes was performed due to her **risk factors**, including:

- Previous macrosomic baby
- Previous pregnancy with elevated blood glucose

An Oral Glucose Tolerance Test (OGTT) was conducted.

Diagnosis

The 75-g Oral Glucose Tolerance Test (OGTT) showed abnormal results consistent with Gestational Diabetes Mellitus.

Diagnostic Criteria for GDM

Diagnosis is confirmed when:

- Fasting plasma glucose ≥ 5.6 mmol/L
- 2-hour plasma glucose ≥ 7.8 mmol/L

Initial Management

After diagnosis, the patient was referred for physician review and started on non-pharmacological management, including:

- Lifestyle modification
- Strict dietary control
- Regular blood glucose monitoring

Therapeutic Management

First-Line Treatment

If fasting blood glucose is below 7 mmol/L, initial management includes:

- Diet modification
- Regular exercise
- Monitoring blood glucose levels

Pharmacological Therapy

If glucose targets are not achieved within 1–2 weeks, treatment options include:

- Metformin therapy
- Insulin therapy if blood glucose remains uncontrolled

Immediate insulin therapy may be required when fasting blood glucose ≥ 7 mmol/L at diagnosis.

Glycemic Targets in GDM

The recommended glucose targets during pregnancy are:

Parameter	Target Level
Fasting blood glucose	≤ 5.3 mmol/L
1-hour post meal	≤ 7.8 mmol/L
2-hour post meal	≤ 6.4 mmol/L

Maintaining these targets reduces maternal and fetal complications.

Fetal Monitoring

Patients with GDM require careful fetal surveillance.

Recommended monitoring includes:

- Serial ultrasound scans every 4 weeks from 28 to 36 weeks
- Assessment of fetal growth
- Monitoring of amniotic fluid volume

These assessments help detect complications such as macrosomia or polyhydramnios.

Delivery Planning

Delivery should take place in a facility with adequate neonatal care and resuscitation services.

After birth:

- The newborn should have blood glucose monitoring within the first 2–4 hours.
- Early feeding should begin within 30 minutes of birth, followed by feeds every 2–3 hours to prevent neonatal hypoglycemia.

Postnatal Management

Immediate Postpartum Care

After delivery:

- Blood glucose-lowering medications are usually discontinued immediately.

Long-Term Follow-Up

Women with GDM have an increased risk of developing Type 2 Diabetes Mellitus later in life.

Recommended follow-up includes:

- Fasting plasma glucose test at 6–13 weeks postpartum
- Annual HbA1c screening thereafter.

Discussion

Gestational Diabetes Mellitus is a significant obstetric condition that requires early diagnosis and multidisciplinary management.

Risk factors include:

- Previous GDM
- Previous macrosomic infant
- Obesity
- Family history of diabetes

If poorly controlled, GDM can lead to complications such as:

Maternal Complications

- Preeclampsia
- Increased cesarean delivery
- Future Type 2 diabetes

Fetal and Neonatal Complications

- Macrosomia
- Birth trauma
- Neonatal hypoglycemia
- Respiratory distress

Early intervention with dietary management, glucose monitoring, and medication when necessary significantly improves maternal and neonatal outcomes.

Key Learning Points

- Gestational Diabetes Mellitus is a common but manageable pregnancy complication.
- Screening using OGTT during pregnancy is essential for early diagnosis.
- Lifestyle modification is the first-line treatment in most cases.
- Regular fetal monitoring is required to prevent complications.
- Postpartum follow-up is important because women with GDM have a higher risk of future diabetes.

Conclusion

This case highlights the importance of early screening, appropriate management, and close monitoring of Gestational Diabetes Mellitus during pregnancy. With proper care, most women with GDM can achieve good glycemic control and deliver healthy babies while minimizing complications.