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De Novo Antepartum Psychosis with Somatic Delusions and Poor Response to Antipsychotics in a Primigravida with Gestational Diabetes and FGR: A Case Report

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Abstract

Background: De novo antepartum psychosis—onset of psychotic symptoms during pregnancy without prior psychiatric history—is exceptionally rare and poorly characterized. Most reported cases occur in women with pre-existing psychiatric disorders or in the setting of obstetric emergencies.

Case Presentation: We report a 33-year-old primigravida at 35+4 weeks of gestation with no prior psychiatric illness who presented with acute psychosis characterized by irrelevant talking, somatic delusions of altered body form, and subjective decrease in fetal movement. She was diagnosed with gestational diabetes mellitus and fetal growth restriction during admission. Her psychosocial history included eight years of infertility in her first marriage to a mute husband, followed by remarriage and spontaneous conception. Initial treatment with haloperidol provided partial improvement; subsequent switch to olanzapine plus escitalopram showed poor response. Elective cesarean section was performed at 36+2 weeks, delivering a 2.0 kg male infant. Postpartum course was marked by severe worsening of psychosis, with hostility, nihilistic delusions, thought broadcasting, and refusal to acknowledge the baby. Electroconvulsive therapy was administered for three cycles, following which the patient responded well and was discharged after improvement with a plan for further follow-up.

Discussion: This case highlights key challenges in managing antepartum psychosis: presentation without prior psychiatric history, poor response to standard antipsychotic regimens, postpartum exacerbation despite delivery, and the potential role of psychosocial stressors such as long-standing infertility as unrecognised risk factors. The case underscores the importance of early interdisciplinary collaboration and the role of electroconvulsive therapy in treatment-resistant peripartum psychosis.

Conclusion: De novo antepartum psychosis should be considered in pregnant women presenting with acute psychotic symptoms, even without prior psychiatric illness. Treatment resistance may occur, and postpartum worsening is possible, emphasizing the need for close monitoring and escalation of therapy, including electroconvulsive therapy when indicated.

Keywords: Antepartum psychosis, Pregnancy, Postpartum psychosis, Fetal growth restriction

Introduction

Psychotic disorders during pregnancy are rare but carry significant risks for maternal morbidity, obstetric complications, and adverse fetal outcomes [1]. While postpartum psychosis affects 1–2 per 1,000 deliveries and is well-recognized [2], [3], Antepartum psychosis is considerably less common and remains poorly characterised [4]. Most reported cases occur in women with pre-existing bipolar disorder, schizophrenia, or a history of postpartum psychosis [5], [6], [7] or in the setting of obstetrical emergencies such as preeclampsia or eclampsia [1,3,4,6]

De novo antepartum psychosis—onset during pregnancy without prior psychiatric history or identifiable medical trigger—is exceptionally rare [6]. When it does occur, it often presents in the late second or third trimester and may include delusions, hallucinations, disorganized behaviour, or catatonia [6], [7]. Management is complicated by concerns over fetal safety of antipsychotics and the need to balance maternal psychiatric stabilization against potential early delivery [8], [9], [10],[11]

We report a case of acute antepartum psychosis in a 33-year-old primigravida at 35+4 weeks of gestation with no prior psychiatric illness, who also had newly diagnosed gestational diabetes mellitus and fetal growth restriction. Her presentation was notable for a

somatic delusion involving alteration of body form and a subjective complaint of decreased fetal movement. Additionally, she had a significant psychosocial history: 8 years of infertility in her first marriage to a non-verbal husband, followed by a second marriage and spontaneous conception one year before presentation. Partial response to as-needed haloperidol and subsequent poor response to olanzapine plus escitalopram, followed by severe postpartum psychosis requiring ECT, illustrates the challenges of managing this condition near term [12], [13], [11]. This case aims to increase clinical awareness of de novo antepartum psychosis and to discuss when to escalate therapy, including ECT.[11-15]

Patient Information

- The patient was a 33-year-old primigravida at 35+4 weeks of gestation, presenting to the Emergency Department of Government Medical College and Hospital (GMCH), Nagpur. She was in her second marriage and had been married for one year. Her first marriage ended in divorce after 8 years of infertility; her first husband was non-verbal. She had no prior psychiatric or medical illness, except for gestational diabetes mellitus (GDM) and fetal growth restriction (FGR), which were diagnosed during admission.

Chief Complaints at Presentation- The patient presented with a sudden onset of disorganized speech, persistent preoccupation with the belief that her physical anatomy was morphologically changing, and reports of reduced fetal activity. Family members reported that her behavioral disturbances surfaced approximately three days before hospital admission, escalating rapidly in severity.

History from Family

- No past or family history of any psychiatric episode
- Patient was a booked case at a Primary Health Centre (PHC) and was referred for evaluation of giddiness

Additional Psychosocial Context

The patient's first marriage lasted eight years and was childless; the first husband was mute. She remarried one year ago and conceived spontaneously. There is no reported history of domestic violence or psychiatric illness in either husband.

Admission Evaluation

- Obstetric findings: No preeclampsia, eclampsia, or abnormal fetal heart rate pattern initially
- Further work-up revealed GDM and FGR (see Table 1)

Table 1: Laboratory and Diagnostic Investigations

Investigation	Result	Reference Range (Non-pregnant Adult)	Remarks
Hemoglobin	11.3 g/dL	12.0–15.5 g/dL	Mild anemia (pregnancy-related)
Total Leukocyte Count	8,700 /µL	4,000–11,000 /µL	Normal
Platelet Count	261,000 /µL	150,000–4,50,000 /µL	Normal
Blood Group	O positive	–	–
HIV	Negative	Non-reactive	–
HBsAg	Negative	Non-reactive	–
Liver Function Tests (LFT)	Within normal limits	–	No HELLP or liver dysfunction
Kidney Function Tests (KFT)	Within normal limits	–	Normal renal function
Serum Electrolytes	Within normal limits	–	Normal
Fasting Blood Sugar (FBS)	100 mg/dL	70–99 mg/dL	Impaired fasting glucose
Postprandial Blood Sugar (PPBS)	126 mg/dL	<140 mg/dL	Normal (but GDM diagnosed by OGCT)
Thyroid Stimulating Hormone (TSH)	1.7 µIU/mL	0.5–4.5 µIU/mL (pregnancy: 0.2–4.0)	Normal
Oral Glucose Challenge Test (OGCT)	152 mg/dL	<140 mg/dL (screening)	Elevated → GDM diagnosed
HbA1c	5.5%	4.0–5.6% (non-diabetic)	Normal (reflects past 3 months)
Ultrasound (Anomaly Scan)	Not performed	–	–
Fetal Growth Assessment	FGR	–	Birth weight 2.0 kg at 36+2 weeks

Vitamin D	Not quantified (supplement given)	–	Adjunctive treatment

Note: GDM confirmed by OGCT despite near-normal FBS/PPBS. FGR confirmed by birth weight <10th percentile.

Initial Psychiatric Management

- First psychiatric referral on admission:
  - ○Tab haloperidol 2.5 mg at bedtime
  - ○Inj Serenac (chlorpromazine) and Inj Phenergan (promethazine) SOS

Response: Partial improvement; irrelevant speech persisted

Second Psychiatric Referral and Change in Therapy

Due to persistent psychotic symptoms, a second psychiatric evaluation diagnosed Severe Depressive Episode with Psychotic Symptoms. - Discontinued: Tab haloperidol - Started: Tab escitalopram 10 mg once daily for 5 days; Tab olanzapine 5 mg twice daily for next 15 days - Adjunct: Vitamin D supplementation - Ongoing obstetric management: Inj Actrapid SOS for GDM

Psychiatric Medication Timeline

Table 2: Psychiatric Medications and Timeline

Time Point	Medication(s)	Dose & Frequency	Duration	Response
Admission (Day 1)	Haloperidol + Serenac (chlorpromazine) + Phenergan (promethazine)	Haloperidol 2.5 mg HS; others SOS	Approximately 5 days	Partial improvement; irrelevant speech persisted
Day 5 (after first psychiatric referral)	Escitalopram + Olanzapine (haloperidol withheld)	Escitalopram 10 mg OD ×5d, then Olanzapine 5 mg BD ×15d	20 days	Poor; no resolution; non-compliance
Postpartum Day 3	ECT initiated; three cycles administered with good response	–	–	Three cycles administered; good clinical response

Patient's Behaviour and Non-Compliance

- Frequently non-compliant with oral medications
- Refused to eat for days
- Advised electroconvulsive therapy (ECT) after delivery due to poor response [12], [13] [16][15]

Delivery

Decision: Elective lower segment cesarean section (LSCS) performed 5 days after admission (at approximately 36 weeks + 2 days gestation)

- **Outcome:** Healthy male baby, birth weight 2.0 kg

Neonatal course: shifted to NICU for weight monitoring

Postpartum Course and Outcome

- **Day 1–2 postpartum:** Refused to believe she gave birth; pulled out IV catheter; required physical restraints; hostile
- **Day 3 postpartum:** Severe hostility, uncooperative, violent
- **Persistent psychotic features:** Delusion of guilt, thought broadcasting, nihilistic delusions
- **Intervention:** ECT administered for three cycles with a good response.

Outcome: The patient responded well, showed clinical improvement, and was discharged with a plan for further psychiatric follow-up.

Timeline of Clinical Events

Table 3: Timeline of Key Events

Day (relative to admission)	Event
Day 1 (35+4 weeks)	Admission to ED with psychosis; initial labs; haloperidol started
Day 2	Psychiatric referral; haloperidol continued; GDM and FGR diagnosed
Day 5	Second psychiatric referral; switched to escitalopram + olanzapine
Day 7	Elective LSCS (36+2 weeks); male baby 2.0 kg transferred to NICU
Day 8–9 (postpartum day 1–2)	Refusal to acknowledge delivery; hostility; pulled out IV; restraints
Day 10 (postpartum day 3)	Severe violence, nihilism, thought broadcasting; ECT initiated; three cycles administered with good response
Day 11 onward	Three cycles of ECT administered; patient improved and was discharged with follow-up advice

Discussion

This case illustrates several important aspects of de novo antepartum psychosis:

1. Presentation without prior psychiatric history – Most antepartum psychosis cases have a known bipolar or schizophrenia spectrum background [5], [6], [7]. Our patient had no personal or family history, making this a true de novo presentation [6].[5-6]
2. Overlap with obstetric complications – She had GDM and FGR. While these are not classic triggers of psychosis, the physiological stress of glucose dysregulation and chronic fetal compromise may have contributed to the onset or severity of psychotic symptoms [4].[4]
3. Poor response to antipsychotics – Initial haloperidol provided only partial relief, and switching to olanzapine plus escitalopram did not achieve remission [8] [16]. This suggests that standard antipsychotic monotherapy may be insufficient in some cases of antepartum psychosis, possibly due to hormonal changes or rapid medication metabolism in pregnancy [9], [10]. Treatment-resistant psychosis in the peripartum period is increasingly recognized [15], [10-11,13-14,17]
4. Somatic delusions and fetal perception – The delusion that her body had changed form and that her baby was "not alright" may reflect pregnancy-specific interoceptive distortions [6], [7]. Such delusions can lead to reduced oral intake, dehydration, and metabolic complications.[6]
5. Postpartum worsening – Despite delivery, psychosis worsened, with hostility, nihilism, and refusal to acknowledge the baby. This supports the hypothesis that postpartum hormonal shifts (e.g., rapid decline in estrogen and progesterone) can trigger or exacerbate psychosis, similar to postpartum psychosis [18], [19], [9], [8].
6. Psychosocial stressors as contributing factors – Our patient's history of 8 years of infertility during her first marriage to a mute husband likely represents a significant, cumulative psychological burden [20]. Infertility is associated with increased rates of depression, anxiety, and, rarely, psychotic episodes—especially when combined with social stigma or lack of emotional communication from a partner [17,21] Transition to second marriage and successful conception may have reactivated unresolved grief or identity conflicts, potentially lowering the threshold for psychotic decompensation in late pregnancy. While a causal link cannot be established, this case highlights the importance of exploring reproductive trauma and marital history when assessing antepartum psychosis.[18-19]
7. Role of ECT – The patient received ECT after delivery due to poor medication response and dangerous behaviour. Three cycles were administered, following which she responded well and was discharged after improvement with a plan for further follow-up. In pregnant or postpartum patients with severe, treatment-resistant psychosis, ECT is considered safe and effective, especially when rapid response is needed to prevent maternal or neonatal harm [11],[12]. ECT, though rare, should be considered in any pregnant woman presenting with acute psychotic symptoms, even without prior psychiatric illness or classic obstetric triggers like preeclampsia [4], [6]. Our case shows that:
    - Partial response to as-needed antipsychotics and poor response to combined olanzapine-escitalopram may occur [8], [10], [15].[10-11]
    - Postpartum worsening is possible and can be severe [3], [18], [19]
    - Longstanding infertility and adverse marital history may serve as unrecognized psychosocial risk factors [20], [21], [22]
    - Early interdisciplinary collaboration (obstetrics, psychiatry, neonatology) and preparedness for ECT can be life-saving [12], [13]

Consent

Written informed consent for publication and anonymity is obtained

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Conflict of Interest—Declared None

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