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Flaccid Paralysis in Pregnancy Due to Autoimmune Etiology: A Rare Case and Multidisciplinary Management

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Abstract: ***Flaccid paralysis during pregnancy is an uncommon but potentially serious neurological condition that demands timely recognition and coordinated care. This article presents the case of a 24-year-old pregnant woman at 28 weeks of gestation who developed progressive weakness and numbness of the lower limbs, later involving the upper limbs and trunk, without any preceding trauma, infection, or toxin exposure. Clinical examination revealed reduced muscle power, absent deep tendon reflexes, and sensory impairment, while imaging and cerebrospinal fluid analysis supported the diagnosis of autoimmune-related flaccid paralysis with longitudinally extensive transverse myelitis. Management involved intensive monitoring, a multidisciplinary approach, and treatment with plasmapheresis and intravenous immunoglobulin, alongside comprehensive nursing care and close fetal surveillance. Gradual neurological improvement was observed, and the patient later delivered a healthy infant by cesarean section, followed by continued recovery in the postpartum period. This case highlights the importance of early diagnosis, vigilant supportive care, and coordinated obstetric and neurological management to achieve favorable maternal and fetal outcomes in rare neurological complications of pregnancy.***

Keywords: Flaccid paralysis, pregnancy complications, autoimmune neurological disorder, transverse myelitis, multidisciplinary care

1. Introduction

Flaccid paralysis is a neurological condition characterized by muscle weakness or paralysis, often caused by autoimmune disorders, infections, or toxins. This condition which often affects breathing or swallowing and one leg or arm and is not typically linked to injury. Pregnancy can increase the risk of developing flaccid paralysis due to immune system changes and increased risk to infections.

2. Case Presentation

A 24-year-old pregnant woman (G3P0A2) at 28 weeks of gestation admitted with the complaints of weakness and numbness in both lower limbs since 2 weeks, progressing to involve the upper limbs and trunk since 2 days. She had no history of trauma, infection, or toxin exposure.

Medical History
She had previous history of two spontaneous abortions before one year. There are no known allergies or medical conditions. There is no family history of similar conditions

Physical Examination

On assessment it was identified that
Her muscle power is 2/5 in lower limbs and 3/5 in upper limbs. The deep tendon reflexes are absent. On sensory examination the sensation in lower limbs is decreased. There are no signs of respiratory distress or cranial nerve involvement. She was found to be conscious and oriented. Her **vital signs** were as follow:

- Temperature: 98.6 F
- Pulse: 82 beats/ min
- Respiration: 24 breath/ min
- Blood pressure: 110/70 mmHg
- SpO2: 99%

3. Investigations

Blood tests:
Haemoglobin- 9.8 g%
Normal complete blood count, electrolytes, liver function tests and renal function test.

Urine test:
Urine Sugar and Albumin are normal.

MRI- Dorsolumbar spine:
Focal cord expansion noted at the level of D3 and D4 dorsal vertebral levels.
Longitudinally extensive transverse myelitis involving almost entire spine.

Radiological test:
Cerebrospinal fluid analysis shows albuminocytological dissociation (elevated protein, normal cell count)

Diagnosis
Flaccid paralysis due to an autoimmune disorder

Management

- She was admitted to intensive care unit for continuous monitoring and supportive care.
- She was treated by the multidisciplinary team like obstetrician, neurologist, and intensivists.
- Plasmapheresis and intravenous immunoglobulin (IVIG) therapy initiated.
- Fetal monitoring shows normal foetal heart rate, development and movements.

Nursing management

- Continuous Assessment on respiratory status respiratory muscle paralysis may occur during pregnancy due to the elevated diaphragm.

- Positioning and Repositioning by changing the patient's position every 2 hours to prevent pressure ulcers.
- Perform passive or active-assisted ROM exercises several times daily to all extremities to prevent joint contractures, muscle atrophy, and deep vein thrombosis (DVT).
- Monitor for urinary retention and signs of urinary tract infections (UTIs).
- Establish a bowel routine as soon as oral/enteral feeding begins to ensure adequate fluid and fiber intake, and use aperients or suppositories as prescribed to prevent constipation.
- Ensure regular fetal monitoring and assessments for well-being.
- Provide emotional support and encourage communication. Involve the patient and family in the care plan to reduce anxiety and depression.

Outcome

- Patient showed gradual improvement in muscle power and reflexes
- Delivered a healthy baby at 35 weeks by cesarean section
- During postpartum period continued improvement, discharged with rehabilitation plan

4. Discussion

Flaccid paralysis is a rare complication of pregnancy, with an incidence of 1-2 cases per 100,000 pregnancies. Prompt diagnosis and treatment with plasmapheresis or IVIG can improve outcomes. Close monitoring and supportive care are crucial to prevent respiratory complications and ensure fetal well-being.

5. Conclusion

Flaccid paralysis during pregnancy requires a high index of suspicion and prompt management to prevent morbidity and mortality. A multidisciplinary approach is essential for optimal maternal and fetal outcomes.

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