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Case Report

A rare case of Guillain-Barré syndrome in pregnancy and its implications: a case report

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ABSTRACT

Guillain barre syndrome (GBS) is a rare neurological disease in pregnancy. Incidence varies from 1.2 and 1.9 cases per 100,000 people annually. It carries high maternal risk and may complicate pregnancy. It usually presents as an acute ascending symmetrical polyneuropathy. It requires early diagnosis and multidisciplinary supportive care for its management.

Keywords: GBS, IVIG, Pregnancy

INTRODUCTION

Guillain Barre syndrome (GBS) is a rare disease that occurs during pregnancy. It is the most common cause of acute, acquired weakness and often preceded by infection. It is a progressive neurological disease characterized by acute onset of symmetric ascending motor weakness accompanying hyporeflexia or areflexia with or without sensory and autonomic disturbances. It often complicates pregnancy and carries high maternal risk. GBS has been linked to a 10% maternal mortality rate, and up to 35% of pregnant women need to be admitted to an intensive care unit for ventilator support.[1]

GBS is divided into three subtypes: acute inflammatory demyelinating polyneuropathy (demyelinating predominance), acute motor axonal neuropathy (absence of demyelinating features), and Miller-Fisher syndrome (ataxia, areflexia, and ophthalmoplegia).[2,3]

Overall, the clinical course, severity and outcomes of GBS are highly variable. Late diagnosis is common during pregnancy or the immediate postpartum period, because the initial non-specific symptoms can mimic pregnancy changes.

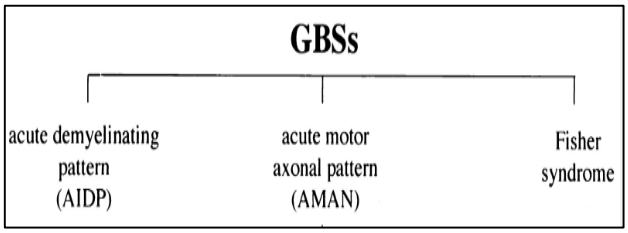

Figure 1: Types of GBS.

CASE REPORT

A 27-year G3P2L2 at 40 weeks period of gestation, presented to our emergency with chief complaints of sudden onset of weakness in bilateral lower limbs since 2-3 days, gradually involving upper limbs also. On further elicitation, there was a history of loose stools one week before presenting symptoms, which was resolved. Rest of the antenatal period was adequately supervised and uneventful. At admission, the patient was conscious, oriented with BP-110/77 mmHg, PR-72 b/m, SpO_2 98% at room air. Cardiac and respiratory systems were normal. On per abdomen examination, uterus was term size, cephalic, fetal heart was present. Neurology consultation was sought, a thorough neurological examination was

performed which showed that higher mental function was intact, power of 4/5 in neck, 4/5 in upper limb, 3/5 in lower limb, tone was also decreased in lower limbs, deep tendon reflex was absent in lower limbs, but the sensations were intact. An impression of GBS was made. Other investigations like nerve conduction studies, electrolytes and later CSF analysis were planned.

Complete blood count, serum electrolytes, renal function, liver function, blood sugar, thyroid profile and coagulation profile were within normal limits. Arterial blood gas analysis showed pO_2-94.2 mm Hg, pCO_2-31.6 mmHg, pH-7.48. Nerve conductions study was performed which showed decrease amplitude of compound action potentials of bilateral median, right ulnar, left peroneal with no response in left ulnar, right peroneal, bilateral tibial nerve which was suggestive of pure motor axonal polyneuropathy. Lumbar puncture was also performed, cerebrospinal fluid analysis revealed increased protein and normal cell count confirming the diagnosis. The patient received IVIg and physiotherapy as a treatment. The symptoms were gradually improved. As the bishops was good, patient induced with oxytocin as per institute protocol. Patient delivered vaginally, delivered a health live born girl of 2.7 kg with Apgar 8, 9. Patient also received DVT prophylaxis accompanying with physiotherapy in post-partum period. Patient was discharged from hospital after 1 week with power of 5/5 in upper limbs, 4/5 in lower limbs with improve tone and improving reflexes in lower limbs.

DISCUSSION

GBS is a polyneuropathy caused by an acute immunological response. It is one of the most prevalent causes of acute, acquired weakness and is frequently triggered by an illness. GBS might be complicated by respiratory failure or autonomic dysfunction in some circumstances. It is frequently caused when an immune response to a previous infection or other event reacts with shared epitopes on peripheral nerve (molecular mimicry).[4,5] All myelinated nerves can be affected. Before the onset of GBS, two-thirds of patients report respiratory or gastrointestinal tract infection symptoms. A particular type of prior infection can be detected in roughly half of GBS patients.[6] *C. jejuni* is accountable for at least one-third of these infections. Other pathogens that cause antecedent infections related to GBS are cytomegalovirus, Epstein Barr virus, mycoplasma pneumonia, Haemophilus influenza, and influenza A virus. The onset of GBS during pregnancy varies as 13% of cases occur in the first trimester, 47% in the second, and 40% in the third trimester.[1,7] The disease may also occur during the puerperium. GBS has no effect on fetal development or increases the risk of miscarriage or fetal death. No study found GBS to be involved in abortion.[8]

The diagnosis of the disease is usually made on clinical, serological, nerve conduction studies and CSF examination. In resource-limited settings, diagnosis is usually made on clinical examination with minimal investigations. The GBS often requires a multidisciplinary approach which includes an obstetrician, neurologist, and neonatologist. The management options include IVIG, plasmapheresis, ventilator support, physiotherapy, supportive treatment such as thromboprophylaxis, antibiotics and psychosocial support. In our patient, we have given IVIG after evaluation and supportive treatment. IVIG is easily and widely available and does not require any instrument. Plasmapheresis and IVIG have been shown to improve treatment outcomes, with 70-80% of patients recovering completely.[9] The need for ventilatory support also increases in pregnancy due to splinting the diaphragm, and in these cases the risk of pre-term delivery is high.[10]

CONCLUSION

GBS is a rare neurological disease in pregnancy, which requires a multidisciplinary approach for early diagnosis and treatment for better maternal and fetal outcomes. IVIG and plasmapheresis are the treatment options, and to be started as early as possible to prevent complications.

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