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## Case Report

# Guillain barre syndrome in pregnancy – Successful management with IVIG- A case report

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### ABSTRACT

Guillain Barre Syndrome is a rare immune mediated acute demyelinating polyradiculopathy, uncommon in pregnancy, but with increased mortality and morbidity. It poses a great diagnostic challenge. Good outcomes can be achieved in these patients with multidisciplinary team involvement. We would like to highlight the need for obstetricians to keep this rare cause in mind by describing the case report of a pregnant lady who presented to our hospital with muscle weakness and how timely diagnosis by appropriate investigations-nerve conduction studies and timely treatment with IVIG prevented complications.

**Key Messages:** 1. Delay in diagnosis is common in pregnancy due to initial nonspecific symptoms which mimic changes in pregnancy. 2. GBS should be considered in pregnant patients presenting with weakness, tingling and numbness. 3. Early diagnosis by involving multidisciplinary team, appropriate investigations (NCS) and prompt initiation of immunomodulatory treatment improves outcomes. 4. Management in pregnancy is like that in the non-pregnant population.

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## 1. Introduction

Guillain Barre Syndrome (GBS) is a heterogeneous group of immune polyradiculopathy. Though rare in pregnancy, it is associated with more morbidity and mortality. A high degree of suspicion is needed to diagnose and manage such patients.<sup>1</sup>We present the case of a pregnant lady who was diagnosed with GBS and successfully managed in our unit.

## 2. Case Presentation

25-year-old, G5 P1L1 presented at 22 weeks period of gestation with progressive lower limb weakness, numbness and tingling for four days and inability to walk or stand. This was followed by development of weakness of upper limbs. She was continent with both bladder and bowel. On examination she was found to have hypo-

reflexic quadriparesis and sensory loss over lower limbs. In consultation with Neurologist, relevant investigations including electrolytes, serum magnesium levels, vitamin B12 levels, MRI brain and spine were done, and they were all normal. Nerve Conduction studies suggested severe axonal neuropathy affecting motor nerves of all limbs and sensory neuropathy of both lower limbs. Accordingly, GB syndrome was diagnosed. By this time the patient had developed weakness of the neck muscles.

The patient was treated with IVIG (dose of 2g/ kg body weight over five days) as respiratory paralysis seemed imminent and she showed prompt response to IVIG. She also received physiotherapy and by one week, she was able to walk with support and regained power in her upper limbs as well. She had a complete recovery in four weeks (i.e. by 26 weeks). She received regular antenatal care and was closely monitored for recurrence of any symptoms. She received enoxaparin 40 mg once

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daily subcutaneous injection as thromboprophylaxis against Venous thromboembolism for four weeks i.e. till her complete recovery at 26 weeks. The rest of the antenatal period was uneventful and there were no specific maternal or foetal concerns. She went into spontaneous labour at 38 weeks and delivered a healthy female baby of 2.6 kilograms vaginally. Intrapartum and postpartum periods were uneventful, and she did not have any postpartum recurrence.

### 3. Discussion

GBS usually presents as acute and rapidly progressive, ascending motor paralysis with or without sensory loss, facial or bulbar weakness and autonomic dysfunction in two third of cases.<sup>1</sup> Also, about one fourth of patients may need mechanical ventilator support.<sup>2</sup> Our case had motor and sensory loss, but no cranial nerve or autonomic involvement. In usually two third of cases of GBS, antecedent trigger by infections, commonly of the respiratory or gastro-intestinal tract are found, but our case did not have such a history.<sup>1</sup>

Diagnosis of GBS is done using several criteria like NINDS (National Institute of Neurological Disorders and Stroke), most of which depend on clinical features and electrophysiological changes. Types of GBS like Acute inflammatory demyelinating polyradiculoneuropathy (AIDP-most common), Acute Motor Axonal Neuropathy (AMAN), and Acute motor-sensory axonal neuropathy (AMSAN) are diagnosed based on Nerve conduction studies (NCS).<sup>1</sup> NCS in our patient showed increased distal latency and decreased conduction velocity in motor nerves in all four limbs and sensory nerves in lower limbs which are features of axonal neuropathy (AMSAN type).

Other differentials like multiple sclerosis, transverse myelitis, compression, etc. was considered but was ruled out with the relevant investigations. Lumbar puncture and CSF analysis showing raised protein content and a normal cell count is typical of GBS. Lumbar puncture (though considered), was not done as NCS showed the typical features.

GBS has a progressive course over 2-4 weeks and then followed by a variable period of recovery. Most patients recover spontaneously. Around 20% of patients may remain disabled at one year due to incomplete recovery or secondary axonal degeneration and around 7% maternal mortality has been reported.<sup>1</sup>

Management of pregnant women with GBS need to be multidisciplinary and akin to non-pregnant population.<sup>3</sup> Immunotherapy in the form of either Intravenous Immunoglobulin (IVIG) or plasma exchange (PE) is used to hasten recovery.<sup>2</sup> Cochrane review has shown that IVIG started within two weeks from onset hastens recovery as much as PE with better continuation rates and similar adverse effect profile.<sup>4</sup> However, IVIG has greater convenience and ease of administration compared to plasmapheresis. The usual IVIG regimen is 0.4 g/kg/day

for 5 days.<sup>2</sup> Our patient showed immediate signs of recovery after IVIG. Continued supportive treatment like physiotherapy and thromboprophylaxis is important and our patient received the same. In patients not improving with IVIG, second course may be tried.

GBS has no effect on uterine contractions or cervical dilatation. Most mothers can deliver vaginally although the ability to bear down in second stage may be weakened and assistance may be required. Our patient had recovered by 26 weeks and so there were no problems at delivery. Anaesthetic concerns include increased sensitivity to muscle relaxants, and to local anaesthetics with risk of cardiovascular collapse, risk of hyperkalaemia with succinyl choline, increased need for post-op ventilation etc. Regional anaesthesia is not contra-indicated but decision should be individualised.<sup>3</sup> Well prepared anaesthetic team was available to attend to our case during labour.

Recurrence is more common in the intrapartum and postpartum period and needs close vigilance. Fortunately, our patient did not have intrapartum complications or any recurrence. She was specifically warned about recurrence and to report immediately if she developed any symptoms.

### 4. Conflict of Interest

The authors declare no conflict of interest.

### 5. Acknowledgement

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