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Subacute Inflammatory Demyelinating Polyradiculoneuropathy in Postpartum Period - A Case Report

Dr. P. N. Luckshana[1], Dr B. Renuka[2]

[1]PG, SBMCH

[2]Assistant Professor, SBMCH

1. Introduction

Guillain–Barré syndrome (GBS) is a collection of clinical syndromes that manifests as an acute inflammatory polyradiculoneuropathy with resultant weakness and diminished reflexes. It is an autoimmune disease in which the immune system starts to destroy the myelin sheath that surrounds the axons of many peripheral nerves, or even the axons themselves. We report a unique case of GBS complicating pregnancy in the post-partum period. The patient recovered well with supportive measures and pulse steroid therapy.

2. Case Report

A case of 19 years old female with 37 wks amenorrhoea Primigravida, Married since 1 year Complaints of leg pain and pedal edema for 1 month following a episode of low grade fever one month ago.

On examination
Patient was afebrile,mild anaemic with BMI 26. BP was 150/90 and PR was 98 and had grade 1 pedal edema. Per abdomen uterus was term relaxed and cephalic with fetus in left occipito anteriorposition. Preeclamsia was suspected and all investigations were done and found to be within normal limits.

Patient went in to spontaneous labour and progressed well to deliver an alive term male baby . In postpartum period patient complained of calf muscle tenderness and weakness of both limbs and had a history of fall in the bathroom due to weakness. DVT was ruled out.Patient developed foot drop and absent deep tendon reflexes.Neurological opinion obtained for bilateral limb weakness and areflexia. She had progressive ascending paralysis with involvement of the upper limbs, followed by trunkal weakness without bladder, bowel, and sensory involvement. The respiratory system, autonomic system, and all her cranial nerves were normal. patient developed flaccid quadriplegia with grade two power(2/5) in both lower limbs and grade three in both upper limbs(3/5)

Hemogram with peripheral smear, kidney and liver function test and urinalysis were normal. Thyroid function tests were within normal range. Magnetic resonance imaging of brain was normal. Nerve conduction tests and cerebrospinal fluid analysis suggested diagnosis of GBS.

3. Treatment

Mainstay of treatment is IVIG or plasma exchange.

- As our patient was not affordable she was treated in our ward with steroid therapy.
- Inj.Methylprednisolone 1 g IV was given.
- The patient improved well the power in both lower limbs increased from 2/5 to 4/5 and in both upper limbs from 3/5 to 4/5 with a single dose of steroid
- So we continued with steroid therapy for 3 days and the patient recovered well.
- IvIg was planned but the patient was not willing for further management .

4. Discussion

- GBS is a neurological disorder resulting primarily in muscle paralysis, which in most cases is symmetrical.
- Most patients complain of numbness, paresthesias, or similar sensory changes. Paresthesias generally begin in the toes and fingertips, and then progresses upwards.
- Pain associated with GBS is most severe in the shoulder girdle, back, buttocks and thighs and occurs even with the slightest movements.
- In Guillain-Barré syndrome the immune system starts to destroy the myelin sheath that surrounds the axons of many peripheral nerves, or even the axons themselves.
- There are 5 variants of GBS classified according to the sites of destruction of peripheral nerves.

Table 2. Features of GBS

Type	Symptoms	Pathology
AIDP	Most common variant (85% of cases); primarily motor inflammatory demyelination ± secondary axonal damage; max of 4 wk of progression	Macrophages invade intact myelin sheaths and denude the axons
AMAN	Motor only with early and severe respiratory involvement; primary axonal degeneration; often affects children, young adults; up to 75% positive *Campylobacter jejuni* serology; often positive for anti-GM1, anti-GD1a antibodies	Macrophages invade the nodes of Ranvier where they insert between the axon and the surrounding Schwann-cell axolemma, leaving the myelin sheath intact
AMSAN	Motor and sensory involvement with severe course of respiratory and bulbar involvement; primary axonal degeneration with poorer prognosis	Similar to AMAN but also involving ventral and dorsal roots
Miller Fisher syndrome	Ophthalmoplegia, sensory ataxia, areflexia; 5% of all cases; 96% positive for anti-GQ1b antibodies	Abnormality in sensory conduction, although the underlying pathology is not clear
Acute pandysautonomic neuropathy	Most rare form; may be accompanied by encephalopathy	Widespread sympathetic and parasympathetic failure

AIDP: acute inflammatory demyelinating polyradiculoneuropathy; AMAN: acute motor axonal neuropathy; AMSAN: acute motor-sensory axonal neuropathy; GBS: Guillain-Barré syndrome; max: maximum.
Source: References 17-20.

5. Conclusion

- Obstetricians should have a high index of suspicion in any pregnant patient complaining of muscle weakness, general malaise, tingling of the fingers and respiratory difficulty in the context of a recent diarrheal illness or viral infection.
- An early diagnosis with intensive multi-disciplinary supportive care helps in improving the prognosis for the mother and fetus.

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