DOI -**10.21276/obgyn.2024.10.2.39** *ISSN Print – 2454-2334; ISSN Online – 2454-2342*

CASE REPORT

Limping legs and racing heart of immediate postpartum – a rare case report

Sowmya Shree Thimmappa, Suma KB

Corresponding author: Dr Sowmya Shree Thimmappa, Assistant professor, Department of OBG, JSS medical college, JSSAHER, Mysuru, India; Email – sownshree@gmail.com

ABSTRACT

Guillain Barre syndrome is a rare neurological complication presenting in pregnancy and post-partum. We present a case of 23 year old gravida 2 para 1 living 1 with 39 weeks of gestation with previous LSCS who presented with nonspecific symptoms in the antenatal period and progressed to develop symmetrical progressive ascending paralysis in the postpartum period with no antecedent history of infection. Patient was managed by a multidisciplinary team and treated with plasma exchange with complete recover at follow. We are reporting this case cause of the rarity of Guillain Barre syndrome in pregnancy and postpartum and nonspecific initial presentation with an unexpected diagnosis in the immediate postpartum.

Keywords: AIDP, leg weakness, pregnancy, tachycardia.

Guillain Barre syndrome (GBS) is an autoimmune disorder of the peripheral nervous system characterized by symmetrical progressive ascending polyneuropathy. GBS may occur at any time of pregnancy with an increased incidence during the postpartum period and accounts for 1.2-1.9 cases per 100,000.[1] GBS classically presents with pain, numbness, paresthesia, or weakness of the limbs and this can be mistaken for a psychological complaint, leading to delay in diagnosis and treatment.[2] GBS occurring in pregnancy is associated with an increased need for ventilator support, and an increase in maternal mortality up to 7% and 20% patients are disabled after a period of 1 year.[3] We present case of 23 year old patient presenting with nonspecific symptoms in antepartum period and diagnosed with autoimmune demyelinating polyneuropathy in the postpartum period. The patient was managed successfully by plasma exchange and other supportive care by multidisciplinary team. We are reporting this case for its atypical presentation with no preceding causative factor in the antenatal period and the rare occurrence of Guillain Barre syndrome in postpartum.

Case

A 23-year-old gravid 2 para 1 living 1 with 39 weeks of gestation with previous LSCS was referred to obstetrics and gynecology department of JSS hospital, Mysore with complaints of generalized weakness, backache, breathing difficulty and pedal edema for 4 days. There was no history of preeclampsia, headache, blurring of vision, epigastric pain, vomiting, weakness of limbs, cough or fever.

On examination patient was afebrile and nopallor. Patient had tachycardia of 130 beats per minute with normal blood pressure recordings and normal respiratory rate, SpO2 was 98% at room air. On obstetric examination the patient was diagnosed to be in latent phase of labor with suspected scar dehiscence in view of persistent maternal tachycardia. She underwent emergency LSCS and delivered a live female baby with 3.2kg birth weight. Intraoperatively uterine scar showed no features of dehiscence and there were no perioperative complications. On the first post operative period patient continued to have persistent tachycardia with ECG showing sinus tachycardia. Echocardiography was normal with 65% ejection fraction. On 2nd post operative day, she complained of weakness in both the lower limb in

Received: 16th December 2021, **Peer review completed**: 21st June 2022, **Accepted:** 27rd September 2022.
Thimmappa SS, Suma KB. Limping legs and racing heart of immediate postpartum – a rare case report. The New Indian Journal of OBGYN. 2024; 10(2): 450 - 52.

the form of inability to lift the lower limb off the ground. Weakness was progressive and she soon developed weakness of upper limb in the form of inability to make a fist, hold objects and mix food. There were no sensory symptoms or bowel and bladder disturbances. Neurology opinion was taken and further managed by multidisciplinary team. On neurological examination power of upper limb was 4/5 and lower limb 3/5 with preserved deep tendon reflexes in both limbs. Nerve conduction study of all the four limbs and CSF analysis done on 2nd post operative day was inconclusive. Serum vitamin B 12 level was found to be normal. In view of preserved reflexes, MRI of brain and spine was done to rule out myelopathy which was found to be normal. Repeat nerve conduction study done on 4th post operative day showed features of acute inflammatory demyelinating polyradiculo-neuropathy (AIDP) with motor axonopathy of both ulnar and common peroneal nerve (right >left) and conduction block in antecubital fossa of right median nerve. Clinical diagnosis of AIDP was made. Weakness of lower limbs progressed to 1/5 in hip flexors to 2/5 in others with depressed bilateral ankle jerk and no sensory deficits. Plasma exchange was planned in view of worsening weakness of both lower and upper limb.3 cycles of plasma exchange was done on alternate days. Patient showed gradual slow recovery of symptoms. Further cycles of plasma exchange was withheld as patient showed gradual improvement in symptoms and return of power in both upper and lower limb. Patient was started on physiotherapy and discharged after two weeks. On discharge the power of upper limb and lower limb was 4/5 with areflexia. Patient showed complete recovery of power of both the upper and lower limbs on follow up at 6 months.

Discussion

Acute inflammatory demyelinating polyradiculo-neuropathy (AIDP) or GBS is one of the rare neurological conditions encountered in pregnancy. AIDP is an acute monophasic demyelinating neuropathy with symmetrical muscle weakness, areflexia, and ascending paralysis. GBS occurs in all trimesters of pregnancy and during postpartum period but particularly more common during the third trimester and first 2-weeks postpartum.[4] Nonspecific initial presentation of neurological conditions like GBS and their similarity with common symptoms of pregnancy makes diagnosis of such conditions difficult as well as leads to delay in diagnosis.

GBS typically presents with pain, numbness, paresthesia or weakness in the limbs and this can be mistaken for a psychological complaint leading to delay in diagnosis and treatment.[5] Loss of autonomic function is common in severe cases of GBS manifesting as wide fluctuations of blood pressure with orthostatic hypotension and sinus tachycardia and even cardiac arrhythmias.[6] It is thought to be an immune response to a precedent infection. About two-thirds of patients have had an infection within the previous six weeks, most commonly a flu-like illness or gastroenteritis. Implicated infectious agents include *M.* pneumoniae, Campylobacter jejuni, Cytomegalovirus and EBV.[7] GBS typically occurs after gastroenteritis and respiratory tract infection, but surgery has also been considered one of the triggers.[6] Recently, Mangar et al[8] reported acute precipitation of GBS after epidural analgesia. Vinay B et al[9] have reported GBS following cesarean section under spinal anesthesia.

Guillain Barre syndrome (GBS) is considered a clinical diagnosis; therefore, a diagnosis can be made with confidence at the bedside in most cases. For atypical cases or unusual subtypes, ancillary testing can be useful.[10] Cerebrospinal fluid (CSF) shows a classic pattern of albuminocytologic dissociation. This term means that spinal fluid shows a normal amount of white blood cells and an elevated CSF protein level.[10] However, this pattern is only present in 80% of patients at 2 weeks following symptom onset. Therefore, the absence of this classic finding does not exclude the diagnosis. Electromyography and nerve conduction studies may be helpful in distinguishing GBS from its mimics.[11] Brain and spinal MRI are indicated to eliminate other causes of polyneuropathy such as subacute compressive myelopathy, transverse myelopathy, and it can show enhancement of spinal roots or cranial nerves in patients with GBS.[12]

In our patient there was no antecedent history of infection and presented with backache, difficulty in breathing, palpitations at 39 weeks of gestation and developed symptoms of lower limb weakness on 2nd post operative day with sustained tachycardia from the antenatal period. She underwent emergency LSCS for the indication of scar dehiscence in view of maternal tachycardia and scar tenderness. Intraoperative findings did not show any signs of scar dehiscence. Pain, located in the back and extremities can be the presenting symptom in the acute phase in up to 66% of patients.[13] In our patient backache was initially considered to be a symptom of early labour but later could be attributed as one of the initial symptom of GBS. Retrospectively tachycardia could be attributed to autonomic dysfunction associated with GBS. Sustained sinus tachycardia, is the most common abnormality observed in monitored GBS

patients, rarely needs to be treated, as it is usually transient.[14] Obstetrician needs to be aware of this rare presenting symptoms and signs of a rare neurological condition when other causes of tachycardia has been excluded. In our patient backache and palpitations were the initial presenting symptoms of Guillain Barre syndrome.

In randomized controlled trials, there are two treatment options currently considered the standard of care in Guillain Barre syndrome (GBS). These include either intravenous immunoglobulin (IVIG) or plasma exchange.[11] Our patient was only treated with plasma exchange. According to moderate quality evidence, plasma exchange improved the majority of outcomes compared to supportive care alone. The time to recover walking with aid, the time to recover walking unaided and the time to improve by one or more disability grades were all shortened by plasma exchange.[15] Up to 20% of patients are disabled after 1 year and a maternal mortality of exceeding 10% has been described (nonpregnant GBS has mortality <5%).[16] Our patient completely recovered with multidisciplinary management and plasma exchange without respiratory distress and without the need for mechanical ventilatory support or IV Ig therapy.

Conclusion

GBS occurring in pregnancy and postpartum is rare. Treating clinician should be aware of this rare condition for timely diagnosis and treatment as initial presentation of GBS is nonspecific and presents with symptoms similar to common symptoms of pregnancy.

Conflict of interest: None. **Disclaimer:** Nil.

References

1. Malek E, Salameh J. Guillain-Barre Syndrome. Semin Neurol. 2019 Oct;39(5): 589-95.
2. Zafar MS, Naqash MM, Bhat TA, Malik GM. Guillain-barré syndrome in pregnancy: an unusual case. J Family Med Prim Care. 2013 Jan;2(1):90-1.
3. Berteau P, Morvan J, Bernard AM, Verjut JP, Cléophax JP. The association of acute polyradiculoneuritis, transitory diabetes insipidus and pregnancy. Apropos of a case and review of the literature. J GynecolObstet Biol Reprod (Paris). 1990;19:793-802.
4. Zeeman GG. A case of acute inflammatory demyelinating polyradiculoneuropathy in early pregnancy. Am J Perinatol. 2001 Jun;18(4):213-5.
5. Vijayaraghavan J, Vasudevan D, Sadique N, Rajeswari KS, Pondurangi M. A rare case of Guillain-Barre syndrome with pregnancy. J Indian Med Assoc. 2006 May;104(5):269-70.
6. Yang B, Lian Y, Liu Y, Wu BY, Duan RS. A retrospective analysis of possible triggers of Guillain-Barre syndrome. J Neuroimmunol. 2016 Apr 15; 293:17-21.
7. Hughes RA, Cornblath DR. Guillain-Barré syndrome. Lancet. 2005 Nov 5;366(9497):1653-66.
8. Mangar D, Sprenker C, Karlnoski R, Puri S, Decker D, Camporesi E. Rapid onset of Guillain-Barré syndrome after an obstetric epidural block. A Case Rep. 2013; 1:19-22.
9. Vinay B, Sonia B, Bhadrinarayan V. Hyperacute onset of Guillain Barre Syndrome in the immediate postpartum period following Caesarean section under spinal anaesthesia. Indian J Anaesth. 2015 Jun;59(6):391-2.
10. Asbury AK, Cornblath DR. Assessment of current diagnostic criteria for Guillain-Barré syndrome. Ann Neurol. 1990;27 Suppl: S21-4.
11. Nguyen TP, Taylor RS. Guillain barre syndrome. StatPearls [Internet]. 2021 Jul 10
12. Donofrio PD: Guillain-Barré syndrome. Continuum (MinneapMinn). 2017, 23:1295-1309.
13. Ruts L, Drenthen J, Jongen JL, Hop WC, Visser GH, et al. Pain in Guillain-Barre syndrome: a long-term follow-up study. Neurology. 2010; 75: 1439- 47.
14. Zaeem Z, Siddiqi ZA, Zochodne DW. Autonomic involvement in Guillain-Barré syndrome: an update. Clin Auton Res. 2019 Jun;29(3): 289-99.
15. Chevret S, Hughes RA, Annane D. Plasma exchange for Guillain-Barré syndrome. Cochrane Database Syst Rev. 2017 Feb 27;2(2):CD001798.
16. Furara S, Maw M, Khan F, Powell K. Weakness in pregnancy - Expect the unexpected. Obstet Med. 2008;1: 99-101.

Sowmya Shree Thimmappa [1], Suma KB [2]

[1] Assistant professor, Department of OBG, JSS medical college , JSSAHER, Mysuru, India; [2] Professor, Department of OBG, JSS medical college, JSSAHER, Mysuru, India.