Case Report

Guillain–Barre Syndrome in Postpartum Period: Rehabilitation Issues and Outcome – Three Case Reports

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Abstract

We report three females who developed Guillain–Barre Syndrome in postpartum period (within 6 weeks of delivery) and were admitted in the Neurological Rehabilitation Department for rehabilitation after the initial diagnosis and treatment in the Department of Neurology. The first case, axonal variant (acute motor axonal neuropathy [AMAN]) had worst presentation at the time of admission, recovered well by the time of discharge. The second case, acute motor sensory axonal neuropathy variant and the third case, AMAN variant presented at the late postpartum period. Medical treatment was sought much later due to various reasons and both the patients had an incomplete recovery at discharge. Apart from their presentations, rehabilitation management is also discussed in some detail.

Keywords: *Guillain–Barre syndrome, postpartum, rehabilitation*

Introduction

Guillain–Barre syndrome (GBS) usually presents as ascending paralysis and symmetrical progressive motor weakness, diminished, or absent reflexes, and criteria for diagnosis are well defined.[1] A systematic literature review of the epidemiology of GBS found the overall incidence of GBS to be 1.1–1.8/100,000 with similar incidence during pregnancy worldwide.[2,3] Here, we report rehabilitative outcomes in three cases of postpartum GBS.

Case Reports

Case 1

A 26-year-old, second gravida presented with weakness in all limbs on the 2nd postpartum day with the history of loose stools followed by paresthesia in bilateral lower limbs (LLs) for the past 5 days. Baby delivered with cesarean section after failed labor trial. Three hours after delivery, she developed numbness in both the LLs with significant weakness progressing to quadriplegia within 12 h of onset and admitted to the Department of Neurology within 24 h. The same day she developed respiratory distress, slurring of speech and dysphagia and hence she was shifted to Intensive Care Unit. She was treated with ventilatory support with nasogastric (NG) tube for feeding and per-urethral indwelling catheter. The diagnosis was confirmed with electrophysiology testing (demyelinating polyneuropathy with axonal involvement) and cerebrospinal fluid (CSF) examination. She was treated with intravenous immunoglobulin for 5 days. She was tracheostomized on the 10th day of ventilatory support. Regular chest and limb physiotherapy was started. Since inability to breastfeed newborn, she developed breast engorgement by postpartum day 7 and treated with tablet cabergoline 0.25 mg, 12 hourly orally for 7 days. Manual breast milk expression was continued to avoid further engorgement and secondary abscess formation. She was off ventilatory support after 55 days and decannulated 11 days after that. She was shifted to neuro-rehabilitation ward for further rehabilitation.

On admission, the patient had bilateral facial weakness, absent gag reflex, dysphagia (on NG tube), normal sensations, and quadriplegia (power 0–1/5, all four limbs) with poor functional abilities. Resting splints (Wrist cock up and Ankle-foot orthosis) were prescribed, and

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comprehensive rehabilitation program started with focus on breathing exercises, spirometry, limb range of motion exercises, positioning, and functional ability training. She had borderline anxiety and depression (Hospital Anxiety and Depression Scale [HADS]; A-8, D-11) for which counseling sessions (social worker-rehabilitation team) were provided. Dysphagia was managed by speech pathologist with improvement to oral feeds of special consistency. At discharge (after 29 days), she had improved facial weakness, minimal slurring, dysphagia managed with special consistency food, good sitting balance, minimal motor recovery, and wheelchair ambulation. She showed improvement in HADS scores (A4/D3). Breastfeeding was withheld in view of oral anticoagulants.

Patient reported after 8 months in follow-up with improved upper limb (UL) power 4/5, LL proximal 3/5, and distal 1/5 and was ambulatory with bilateral ankle-foot orthosis.

Case 2

A 27-year-old primiparous presented with bilateral LL weakness after 40 days of delivery. Weakness progressed to complete paraplegia over the next 7 days with urinary retention. Diagnosis was confirmed with electrophysiology (acute motor sensory axonal neuropathy [AMSAN]) and CSF examination and was treated with five cycles of large volume plasmapheresis (LVPP). She was transferred to neuro-rehabilitation with LL power proximal 1/5, distal 2/5, sensory examination suggesting normal sensations up to lumber 3 dermatome, distal paresthesia, absent joint position sense in toes. She showed improvement in motor power with rehabilitation and conventional gait training was initiated with ankle-foot orthoses (AFOs). HADS scores were suggestive of borderline anxiety (A = 9, D = 3), which normalized after counseling sessions (no pharmacotherapy required). At discharge (after 34 days), she was independent for most of the activities of daily living (ADL) and ambulatory with AFO.

At follow-up after 3 months, she became ADL and ambulation independent.

Case 3

A 20-year-old primiparous, postpartum day 35, presented with quadriparesis, which progressed over the next 7 days and admitted to the Department of Neurology. After 14 days of onset, she developed dysphagia and speech difficulty. She was treated with five cycles of LVPP after confirming diagnosis and transferred to neuro-rehabilitation. On admission, UL strength was proximal 4/5 and distal 1–2/5. Both LL were 0–1/5. She had restrictive pulmonary functions with single breath count of 3. With rehabilitation, motor status improved minimally in LL, dysphagia improved in next 1 week, and NG tube was removed. UL and LL resting orthoses were prescribed to avoid deformities. HADS scores were suggestive of borderline depression (A = 3, D = 10) which improved (D = 3) after counseling. At discharge (after 26 days) with good dynamic trunk control, she was moderately ADL dependent with wheelchair ambulation.

Discussion

GBS occurs in all trimesters of pregnancy and during postpartum period but particularly more common during the third trimester and first 2-week postpartum.[4] In the first case, GBS appeared immediate post lower segment cesarean section. In other two, illness occurred between the 5th and 6th week postpartum. Typical GBS has been reported to be most common during pregnancy and postpartum period in a study of 47 patients.[5] In this case reports, there were two acute motor axonal neuropathy (AMAN) and one AMSAN variant of GBS.

The outcome is usually good in majority of GBS patients in terms of motor recovery and functional independence[6] with AMAN variant having delayed recovery.[7] GBS, in general, has 5% incidence of mortality, but in postpartum, GBS mortality is reported to be higher (10%), emphasizing importance of early diagnosis and rehabilitation.[8] All three patients were observed to have both anxiety and depression ranging from mild to severe. The reasons were separation anxiety and difficulty in feeding infant other than quadriparesis. They were managed by counseling sessions educating patients along with family regarding illness, prognosis, and supportive care. Family specific interventions were undertaken when needed.

Breast engorgement was present in the first patient in the 1st week postpartum. She was managed with tablet cabergoline, a long-acting dopamine receptor agonist with a high affinity for D2 receptors and has a direct inhibitory effect on prolactin secretion. She was advised regular milk expression and cold gel packs, apart from pharmacotherapy.[9]

All patients were treated for deep vein thrombosis prophylaxis and followed up for prothrombin time/international normalized ratio over the telephone after discharge. Breastfeeding was avoided until patients were on blood thinners.

In a 1-year follow-up study performed at the same center with 69 GBS patients, it was observed that the patients continue to show significant functional recovery

for long period and large number of patients continue to require orthosis and assistive devices for ambulation.[10] Two of our patients, who reported in follow-up, showed continuous recovery even after discharge. Only one patient was independent at 3-month follow-up without orthosis for ambulation.

Conclusions

GBS should be considered in patients developing acute onset symmetrical flaccid motor weakness in the postpartum period. Comprehensive rehabilitation can reduce disability and helps in making patients independent even with less than optimum recovery.

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Conflicts of interest

There are no conflicts of interest.

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