Case Report

Indian Journal of Emergency Medicine
Volume 2 Number 1, January - June 2016
DOI: http://dx.doi.org/10.21088/ijem.2395.311X.2116.16

Guillain-Barre Syndrome: Diagnostic Challenge in ED to Rule Out Other Causes of Polyneuropathy

Kalita R.*, Kaul M.*, Das I., Datta K.*****

Author's Affiliation:
*MEM PGY2, **Attending Consultant, ***Senior Consultant and HOD, Dept. of Emergency Medicine, Shalimarbagh, New Delhi.

Corresponding Author:
Rigenjyoti Kalita, MEM PGY 2, Department of Emergency Medicine, Max Hospital, Shalimarbagh, New Delhi., Delhi 110088.
E-mail
rigen_001@yahoo.com

Abstract

Guillain-Barre Syndrome (GBS) is a immune mediated peripheral nerve myelin sheath destruction usually presented with bilateral lower extremity pain, worsening dysphagia, subsequent ascending symmetric weakness, and loss of deep tendon reflexes. The diagnosis is usually made based on the signs and symptoms, through the exclusion of alternative causes, and supported by tests such as nerve conduction studies and examination of the cerebrospinal fluid. Patients having atypical presentation, incomplete weakness, and some inconsistencies in their physical examination are diagnosed as having some psychological cause and the diagnosis is very difficult . In severe cases, there is risk of ventilator failure associated with cardiac instability , so early diagnosis and prompt referral should be needed. This article presents a case of GBS who presented in emergency with complain of dysphagia for 20 days and dyspnea specially on neck movement associated with quadriparesis and autonomic disturbances without involvement of sensory system.

Keywords: Neuropathy; Dysautonomia; GBS; Cerebrospinal; Ascending Weakness.

Introduction

Guillain-Barre Syndrome (GBS) is a immune mediated peripheral nerve myelin sheath destruction usually presented with bilateral lower extremity pain, worsening dysphagia, subsequent ascending symmetric weakness, and loss of deep tendon reflexes. Variants of GBS may present as pure motor dysfunction or acute dysautonomia. Two thirds of people with Guillain–Barré syndrome have experienced an event of infection most commonly episodes of gastroenteritis or a respiratory tract infection. The diagnosis is usually made based on the signs and symptoms, through the exclusion of alternative causes, and supported by tests such as nerve conduction studies and examination of the cerebrospinal fluid. Patients having atypical presentation, incomplete weakness, and some inconsistencies in their physical examination are diagnosed as having some psychological cause and the diagnosis is very difficult. They are frequently sent home from the emergency department and then return with persistent or progressive symptoms hours to days later. Early diagnosis and prompt referral should needed in severe cases due to the incidence of potential ventilatory failure and cardiovascular instability.

Case Report

A 59 year old male patient presented to ED with complaining of difficulty in swallowing since 20 days for solids and impaired balance on neck movement for three days and gradually increasing. There is also associated breathlessness on increase in neck movement. The patient also complained of slurring of speech and poor salivation. There is no history of loss of consciousness and no seizure at home. Patient had no history of any unilateral upper or lower limb weakness. It all started 3 days ago and the symptoms tend to increase over this period of time. The patient did not give any history of recent fever or viral illness and there was no history of any trauma in the recent

past. However his blood pressure was high when he went to his family physician.

Primary Survey

Airway Assessment :

Patent

Breathing Assessment

Respiration(RR/min) :28/MIN

Laboured : YES

SpO2 : 90 % on Room Air

Circulation

Pulse :116/MIN

BP :190/110MMHG

Peripheral Pulses : YES

Temperature :98.4F

Cardiac Monitor :NSR

GRBS:130mg/dl

Pupils :

Right eye :NSNR

Left eye :NSNR

Secondary Survey

Heent : Flushed Facies, No Icterus

Chest : B/L AE+ with Rt. Sided Crepts.

CVS : S1 S2 N

ABD : SOFT, BS+, NO TENDERNESS

EXT : B/L PEDAL EDEMA

Cns : Conscious, Oriented, Weakness All Four Limbs with Bifacial LMN Paresis , Neck Flexor Weakness and Dysnpneic.

Power — UL — Proximal 3/5; DISTAL 4+/5

LL — Proximal 4-/5; DISTAL 4+/5

Reflexes 1+

Sensory Intact

Plantars Mute.

Others :

Ample History

Allergies : No Known Allergies

Medications: none

Past History:- No history of DM, HTN, CAD

Last meal: Lunch(Liquid only)

Events: Gradual increase in difficulty of swallowing.

Working Diagnosis: Demyelinating Disease

- ❖ Multiple Sclerosis
- ❖ GBS/ GBS Variant.

Albuminocytological Disassociation.

Treatment Advised

1. Inhalation @ 2litres
2. Inj augmentin 1.2 gm iv thrice daily
3. Inj pantop 40 mg iv twice daily
4. Inj lasix 20 mg iv bd
5. Nebulisation with duolin 6 hrly
6. Tab n-acetylcystiene twice daily
7. Tab amlodepin 10 mg stat
8. Tab telma 40 mg twice daily
9. Tab novostat 20 mg once a day
10. Vitals monitoring
11. Propped up position
12. Physiotherapy.

Investigatios Ordered

CT Scan Brain (Could not be done as patient became dyspnic on lying supine)

1. MRI Brain Stroke Protocol + MRI Cervical Spine (Plain)
2. NCS + EMG—(All 4 Limbs) :- Evidence of Conduction Block in Bilateral Tibial and Right Median Nerve
3. Hemogram- Hb-14.2,TLC-8.6,PCV-44.4,PLT-3.51,Neutrophil-74
4. KFT - UREA-22, Creatinine-0.75
5. LFT-WNL
6. Electrolyte-Sodium-125, Potassium-4.7 , Chloride-90 .3
7. HB1Ac - 6.9
8. CXR- S/O Pneumonitis
9. Lpid Profile –Cholesterol-187, Triglyceride-210 , HDL-56.6, LDL-94 , VLDL-42
10. USG Chest-NAD
11. ECHO Evaluaton

    -NO LV RWMA

    LVEF-60%

-MILD TR , RVSP 20 MM HG

-NO CLOT/VEG/PE

-IAS IVS INTACT

12. Lumbar Puncture with CSF Analysis: Cytology and Biochemistry:- Acellular , Glucose-106, Protein-66.6

    Cryptoccocal Antigen:- Negative Gram Stain, AFB Stain, Culture and Sensitivity:- Negative

13. Antinuclear Antibody (Ana)- Negative
14. Angiotensin Converting Enzyme Level - Normal

ED Course

In view of desaturation and dyspnea, the patient was intubated in ED using rocuronium 100 mg iv with 8 size et tube and started on midazolam and fentanyl.

MRI Brain done and showed :- Multiple Demyelinating Lesions

Lumbar Puncture done and showed :- High Protein and S/O Albuminocytological Dissociation

Treatment Added

Human IV IG (Immunorel — 0.4gm/Kg Body Weight IV Daily for 5 Days)

Patient was admitted under the care of Internal Medicine and Neurologist and shifted to Medical ICU.

Conclusion

Although GBS or any Demyelinating disorders are less frequent presentations to the ED but a good history taking and clinical examination is paramount in the diagnosis. As emergency physician we should have a open book of differential and a thorough investigative measures should be taken in ED. Also a very important aspect in such disorder is the anticipation of respiratory paralysis and hence early intubation and mechanical ventilation should be done to avoid rapid deterioration.

References

1. Asbury AK. Diagnostic considerations in Guillain-Barrésyndrome. Ann Neurol. 1981; 9 (Suppl): 1–5.
2. Asbury AK, Cornblath DR. Assessment of current diagnostic criteria for Guillain-Barré syndrome. Ann Neurol. 1990; 27: S21–S24.
3. Guillain-Barré syndrome variants in Emilia-Romagna, Italy, 1992–3: incidence, clinical features, and prognosis. Emilia-Romagna Study Group on Clinical and Epidemiological Problems in Neurology. J Neurol Neurosurg Psychiatry. 1998; 65: 218–224. No authors listed.
4. Ropper AH. Unusual clinical variants and signs in Guillain-Barré syndrome. Arch Neurol. 1986; 43: 1150–1152.
5. Ropper AH. The Guillain-Barré syndrome. N Engl J Med. 1992; 326: 1130–1136.