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GBS Associated with COVID 19

General Medicine

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ABSTRACT

- Coronavirus can cause Multiple Systemic Manifestations and Respiratory Complications are most Obvious.
- We Reported 62-Year-Old Male Patient with Complaints of Acute Progressive Symmetric Ascending Quadriparesis.
- Patient received daily infusions of IVIG (Total Dose of 2g / kg Body weight) for 5 Days.

KEYWORDS

Background

- Symptoms of COVID-19 are dependent on the age and the patients underlying medical illness and also on the condition of the immune system.
- Most of the Infected patients suffer from an underlying disease including Hypertension, Diabetes Mellitus and Coronary Vascular Diseases.
- Onset of the Symptoms occurs after an incubation period of approximately 5 days like fever, cough, dyspnoea, myalgia, headache, diarrhea.
- Gastrointestinal Complications, acute Cardiac Damage, Acute Renal Failure due to COVID 19 are also reported.
- Nervous System Manifestations like headache, hypogeusia, hyposmia, Muscle Damage, Ischemic and Hemorrhagic Stroke are seen.
- GBS is an Acute immune Mediated Disease of the peripheral nerves and nerve Roots (Polyradiculoneuropathy).
- Classic Manifestations of GBS Is progressive ascending Symmetrical, Flaccid Limb Paralysis along with areflexia or hyporeflexia with or without Cranial Nerve involvement.

Case History:

- A 62-year-old Male Patient resident of Guntur was admitted to the emergency department with symptoms of acute progressive symmetric ascending quadriparesis.
- Neurological manifestation of the patient began with acute progressive weakness of the distal lower extremities 6 days before admission.
- Symptoms progressed from distal limbs to proximal limbs and he had been quadriplegic for one day before admission.
- There was no facial paresis or other cranial nerve involvement and no urinary and fecal incontinence.
- 3 weeks prior hospitalization patient suffered from cough, fever and without dyspnoea for 3 days.
- RTPCR for COVID 19 Turned out to be POSITIVE and patient was admitted in the ward in view of High-Risk Factors of elderly age and Diabetes, CT Chest of the patient has shown peripheral Ground Glass Opacities in bilateral Lung Fields with a CT Severity Index of 5/40 and was treated with Remdesivir for 5 days and Azithromycin for 3 days.
- Patient was a known Type 2 Diabetic for 5 years and was on metformin 500mg BD PO. Patient was discharged after 5 days of admission.

ON EXAMINATION:

Patient is Conscious and Coherent,
BP - 120/80 mm of Hg
PR – 82 b/ min
SPO2 – 97 % with Room Air
RR - 16 breaths per minute.

MUSCLE STRENGTH EXAMINATION with MRC(Medical Research Council) Grading.

	PROXIMAL	DISTAL
UPPER LIMB	2/5	3/5
LOWER LIMB	1/5	1/5

- All Deep Tendon Reflexes are **ABSENT**
- Reduced Vibration distal to the ankle joints
- Had no Spinal Sensory Level
- Meningeal Irritation signs, UMN Signs are Absent.

Laboratory Investigations:

Random Blood Sugar Level – 169 mg / dl
BUN – 19mg/dl
Serum Creatinine – 0.7 mg /dl
Serum Bilirubin - 0.8 mg /dl
ALT 48 IU/L
AST 36 IU/L

Serum Na^+ - 132 mmol/L
Serum K^+ - 3.8 mmol/L

WBC Count -11,012 cells /Cu.mm (Neutrophils 78%, Lymphocytes - 11%)ESR -72mm /hr
Hb – 11g/dl

CUE – Negative for Glucose and Ketones

MRI BRAIN – NO ABNORMALITY DETECTED
MRI C SPINE and Whole Spine Screening - NO ABNORMALITY DETECTED

CT CHEST – Ground Glass Opacities in Both Lungs

- on Day 10 after symptom onset – Neurophysiological Study was performed which showed Decreased amplitude at CMAP. Increased F-Wave Latency and No response at sensory Nerve action potential
- EMG - Shows Decreased Recruitment.
  Findings Consistent with Acute Motor Sensory Axonal Neuropathy.
- CSF Analysis was not performed due to lack of consent.

DISCUSSION:

- COVID 19 is a beta Coronavirus like SARS & MERS
- Both SARS and COVID 19 Attach to the ACE 2 Receptor of Lungs, Kidneys, GIT, Liver and Nervous System & Skeletal Muscle.

- COVID 19 Stimulates inflammatory cells and produces various inflammatory cytokines and as a result it causes immune mediated injury.

CONCLUSION:

- Given the most Common Symptoms of infection with the COVID 19 were respiratory and two thirds of the GBS patients usually mention respiratory symptoms before the onset of the weakness, hence GBS should be Considered as neurological Complications for infection with COVID 19.
- Therapy with IVIG or Plasmapheresis should be initiated along with antiviral treatment.

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Conflicts of Interest – NIL
Consent - Consent was taken

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