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Correspondence

Letter to the editor. Concerning the article entitled “Guillain Barre syndrome associated with COVID-19 infection: A case report”

Narges Karimi ^{a,*}, Zahra Sedaghat ^b^a Immunogenetics Research Center, Clinical Research Development Unit of Bou Ali Sina Hospital, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran^b Department of Neurology, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

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Dear Editor,

A paper was published recently by Zahra Sedaghat and Narges Karimi entitled “Guillain Barre syndrome associated with COVID-19 infection: A case report” [1]. The authors would like to describe the patient’s condition after six-week follow up. As described in the previous article, the patient was a 65-year-old man who had been admitted to the university hospital, with the symptoms of acute progressive symmetrical ascending quadriparesis and bilateral facial paresis. His symptoms had been started two weeks after diagnosed COVID-19 infection [1]. At the time of hospitalization, the patient had the muscle weakness in four limbs with a Medical Research Council (MRC) scale of 2/5 in proximal, 3/5 in distal of the upper extremities and 1/5 in proximal, 2/5 in distal of the lower extremities. The electromyography and nerve conduction velocity findings were in favor of acute motor sensory mixed polyneuropathy (1). This patient had been treated with intravenous Immunoglobulin (IVIg) 30 g/day for 5 days. After four weeks of treatment the patients improved and walked without assistance. He was able to drive and returned to his work. The muscle stretch examination showed MRC scale of 5/5 in the upper and lower extremities bilaterally. Table 1 showed electro diagnostic findings after 6-week of treatment. Sural sensory nerve action potential (SNAP) was normal bilaterally with decreased amplitudes and slowing of

conduction velocities at other SNAPs. There was conduction block in median and ulnar motor nerves (Table 1). There was a partial improvement in comparison with the previous electrodiagnostic test [1]. The outbreak of coronavirus disease 2019 (COVID-19) has been started in Wuhan, China, and then expanded to other countries. The Patients with COVID-19 characteristically demonstrate fever and respiratory complaint [2]. limited studies reported neurological manifestations of COVID-19 [3–5]. Also, a little information is available on the association of GBS and COVID-19. Zhao et al. reported concurrence Guillain Barre syndrome (GBS) and COVID-19 in a 61-year-old-woman [6]. They described that the limb weakness of patient improved approximately one month after admission, similar to our study [6]. Padroni et al. reported a 70-year-old-woman with GBS symptoms, 3-week after diagnosed COVID-19 infection [7]. In our patient, the neurological symptoms of GBS revealed 2-week after detection COVID-19 infection. According to reports, COVID-19 can be considered a possible cause of GBS, and IVIG can be as a therapeutic option in association GBS and COVID-19 [8].

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

* Corresponding author at: School of Medicine, Immunogenetics Research Center, Pasdaran Boulevard, Bou Ali Sina Hospital, Sari city, Mazandaran province, Iran.

E-mail address: N.karimi@mazums.ac.ir (N. Karimi).

Table 1
Nerve conduction studies in the patient with GBS and COVID-19 infection, 6-week after treatment.

Nerve	Stimulation	*Amplitude		Latency (ms)		Conduction velocity (m/s)		F wave	
		RT	LT	RT	LT	RT	LT	RT	LT
Stimulated	Site								
Median (s)	Wrist	8.0	4.2	4.69	4.84	34.0	31.0		
Ulnar(s)	Wrist	12.4	6.6	3.75	3.91	39.0	36.0		
Sural (s)	Calf	6.6	8.5	3.59	3.65	48.0	51.0		
Median (m)	Wrist	6.7	7.0	5.21	5.89	46.0	40.0	34.3	36.4
	AF	5.3	5.8	10.0	11.35	31.0	41.0		
Ulnar (m)	Wrist	7.0	5.0	3.59	4.06			32.6	36.8
	BE	6.1	4.6	8.13	9.9	49.0	39.0		
Tibial (m)	Ankle	2.7	2.9	4.27	4.48			75.0	65.0
	Popliteal F.	0.4	0.3	20.16	17.81	22.0	27.0		
Peroneal (m)	Ankle	1.1	1.0	6.67	7.76				
	Fib head	0.2	0.9	20.0	16.56	25.0	22.0		

*Amplitude motor = mV, Sensory= μ V; m = motor study; s = sensory study; RT = right; LT = left; AF = antecubital fossa; BE = below elbow; BF = below fibula; GBS = Guillain Barre syndrome.

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