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CONVERSION DISORDER MIMICKING HEMIPLEGIA ASSOCIATED WITH COVID-19 INFECTION: A RARE CASE REPORT

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INTRODUCTION

Conversion disorder is defined as complete or partial loss of a neurological function that can not be referred to any organic pathology; but seems to be initiated by physchological stressors (Cankay & Besenek 2020, Cojan et al. 2009). Hysterical paralysis (HP), a form of conversion disorder, is psychogenic loss of sensory and/or motor function (Higuchi et al. 2016, Zhu et al. 2012) not intentionally simulated and manifests in 10-23% of patients with conversion disorder (Ryu et al. 2014) It mimicks the symptoms of a structural nervous system disease (Zhu et al. 2012) and occurs shortly after a initiating trauma or social event (Higuchi et al. 2016) in non-anatomic manner topographically (Boudissa et al. 2015).

HP cases are quite rare, some were reported after surgical interventions (Boudissa et al. 2015, Higuchi et al. 2016, Ryu et al. 2014, Zhu et al. 2012). Here an HP case initiated by Novel Coronavirus Disease 2019 (COVID-19) is presented, which is the first report in the literature to date.

CASE REPORT

The subject gave written informed consent.

A 34-year-old, generally healthy, married male, public officer working at desk job admitted to physical medicine and rehabilitation department for sudden weakness and inability to move right upper and lower limbs, 1 month after the treatment of COVID-19 infection.

His medical history was inconspicuous. Right hemiplegia without any sensory or autonomic deficits was noted on physical examination. Deep tendon reflexes and pathological reflexes were normal and he had full control of his sphincters. Peripheral vascular status was normal.

Muscle strengths of right lower limb were 1/5; while the right upper limb reduced to 2/5 according to muscle testing procedure (Medical Research Council 1976). On day 2, in the course of follow-up, the 'paralyzed' right upper limb moved while the patient was talking and the meanwhile muscle strengths were 4/5 (Medical Research Council 1976). This reminded the HP diagnosis, because it is characterized by inconsistency and variability in the presence, persistence and severity of symptoms (Heruti et al. 2002). Paralyzed limbs might move 'accidentally' when the patient is distracted or during a physical activity (Heruti et al. 2002). The patient also seemed to be calm and neglectful of his symptoms demonstrating the 'la belle indifference', in which subjects suffering from HP keep themselves from anxiety (Heruti et al. 2002).

Blood tests presented normal findings. Scans of lumbar and pelvic magnetic resonance imaging (MRI) with cranial diffusion MRI revealed no definite abnormality (Figure 1). Findings of neurophysiological tests, involving electromyography and motor evoked potentials were normal. Neuromuscular disease was ruled out.

A psychiatrist also verified conversion disorder and the final diagnosis was HP of unilateral upper and lower limbs as a result of psychological stress associated with COVID-19 infection.

An instant comprehensive rehabilitation program (muscle-strengthening exercises with functional gait training) including faradic current therapy was planned for the patient with the prescription of antipsychotic risperidone 0.5 mg per day by the psychiatrist.

During rehabilitation, his symptoms improved gradually. He was encouraged and reinforced in a positive manner to make an effort.

The patient was discharged ambulating with no aid after 15 sessions of treatment.

DISCUSSION

Several clinical presentations of HP exist, which are associated with diagnostic difficulty due to varying

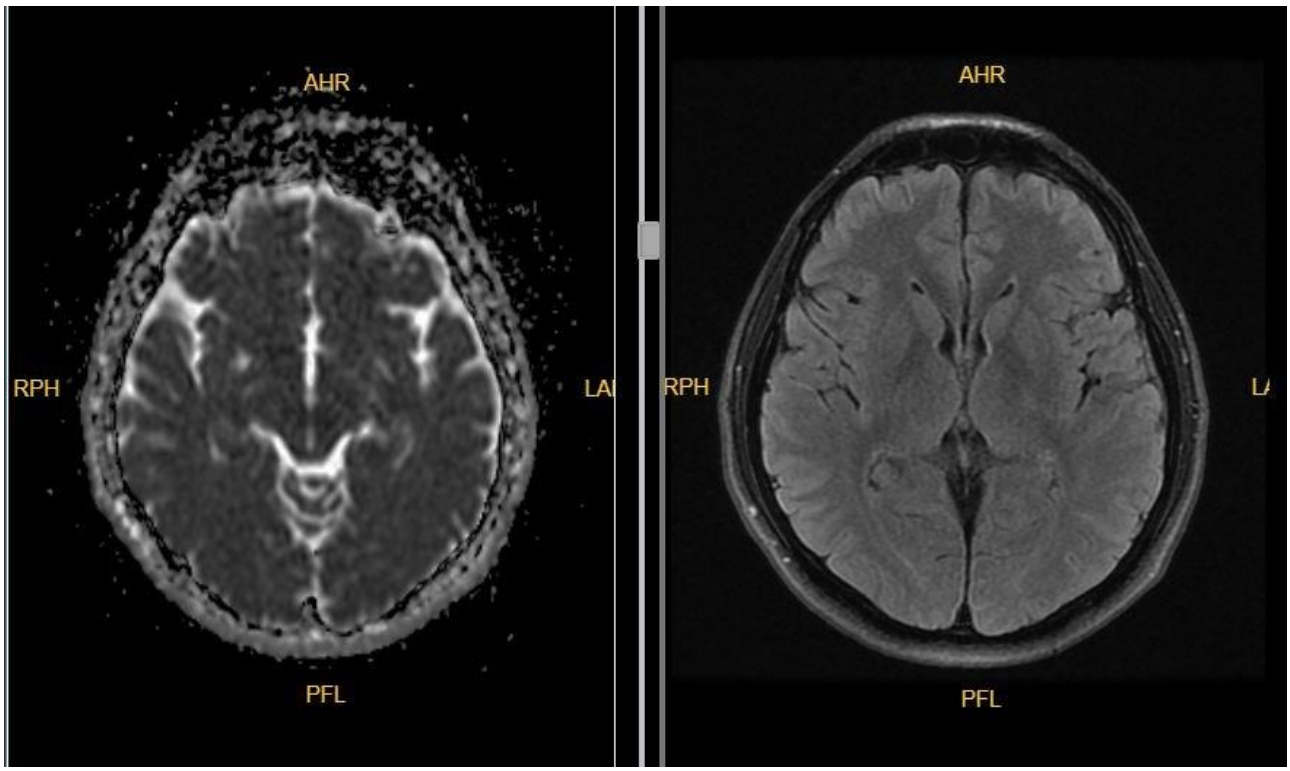


Figure 1. Cranial diffusion MRI: No acute ischemia and gross intracranial pathology/hemorrhage. MRI: magnetic resonance imaging

degrees of complexity (Boudissa et al. 2015). When objective findings and clinical presentations are contradicted, disfunctionality due to a psychological stressor should be kept in mind; but like a double-edged knife, the slightest doubt of organic etiology should avoid the clinician from being hasty and mis-or-late diagnosis (He et al. 2021).

Patients with HP must be differentiated from malingering ones whose symptoms are provoked intentionally and related to secondary gain (Heruti et al. 2002, Ryu et al. 2014). HP ones are potentially more cooperative, trusting and amicable, also accept evaluation and adapt to treatment with pleasure (Ryu et al. 2014). They tend to declare gaps of their medical history, inaccurate implementations of themselves and unpredictable changes; whereas malingerers explain their precipitating factors perfectly and definitely (Ryu et al. 2014).

The prognosis of HP is controversial. It is important to provide the rehabilitation treatment while not showing excessive concern (Ryu et al. 2014) in a non-judgmental manner (Boudissa et al. 2015).

Obscruities, disinformation and speculative approaches about COVID-19 are expanding among people almost as widely as scientific facts. It may be claimed that this situation caused the patient to fear and develop HP. Informing of the disease should be controlled under the framework of public measures to increase general awareness of people, and so decrease neglectful behaviors and irrational opinions (Cankay & Besenek 2020). Home healthcare services should be widespread and patients should be encouraged to use telemedicine and telepsychiatry, which is a novel notion in providing mental health support (Nath et al. 2020).

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Ozlem Karasimav: design, supervision, data collection and processing, analysis and interpretation, literature search, writing manuscript, critical review.

Tuba Guler, Fatma Gul Yurdakul & Hatice Bodur: concept, design, supervision, data collection and processing, analysis and interpretation, literature search, critical review.

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