

INCARCERATION SYNDROME AFTER CEREBRAL VASCULAR ACCIDENT: CASE REPORT

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Abstract: The case reported brings the discussion about the Imprisonment Syndrome, a rare neurological disease, characterized by complete paralysis of all voluntary muscles, with the exception, usually, of those that control the eyes, presented by a 55-year-old patient after an episode of Vascular Accident. Ischemic Cerebral Stroke (CVA). With involvement of the basilar artery, the patient manifests anarthria and follows individualized treatment. The information was obtained from a review of medical records and literature.

Keywords: Imprisonment Syndrome, Stroke, Basilar Artery.

INTRODUCTION

The Imprisonment Syndrome (ES) has as the main clinical manifestation the paralysis of most of the voluntary motor function of the body, with the exception of the oculomotor function. It is caused by any lesion that affects the ventral pons and midbrain, this includes the vascular lesions, masses, infections, trauma and demyelinating disorders (SECCO et al., 2021; DAS et al., 2022).

His literary description was in the book *The Count of Monte Cristo*, in which after the stroke one of the characters could communicate only by blinking his eyes, being described as a “corpse with living eyes”. The medical description was first performed in 1966, SE was defined as a condition associated with a ventral bridge lesion, mainly in the basilar artery, which causes rupture of the corticospinal and corticobulbar pathways, causing severe paralysis (quadriplegia or quadriparesis), disability of speech (aphonia or severe dysphonia), with preservation of cognitive and sensory abilities. The notion of the existence of three different manifestations for SE: classical, incomplete and total, was introduced in 1979 (ANGELIN et al., 2020).

The classic syndrome is characterized by a state in which the individual has quadriplegia and anarthria, with preservation of vertical eye movement, with ischemic stroke being its main cause. The incomplete syndrome, on the other hand, refers to the same characteristics of the classic syndrome, however, with the addition of remaining voluntary movements. And, finally, the total syndrome is characterized by complete paralysis of the voluntary muscles (BAUER et al., 1979).

The mean age of onset for all cases of entrapment syndrome generally ranged from 30 to 50 years, with a slight male predominance. A survey carried out by the Association of Locked-In Syndrome of France (ALIS), among men and women with Syndrome of Imprisonment by non-vascular agents, showed that both groups were equally affected: 51.2% of diagnosed men and 48.1% of diagnosed women (DAS et al., 2022).

This case report describes the presentation of Imprisonment Syndrome in a female patient due to basilar artery stenosis.

CLINICAL CASE DESCRIPTION

Patient V.S.N., 55 years old, female, white, upon waking up on 04/24/2022 presented severe headache, nausea and difficulty moving right hemibody evolving with upper limb hypertonia and loss of the sensory system. So, she looked for the Emergency Department of Mirassol, where she was referred to Cáceres.

During investigation of a possible etiology, the hypothesis of stenosis of the basilar artery was raised, due to the high-intensity tubular image of this artery, being referred to the General Hospital in Cuiabá to be approached by the neurosurgery team.

The patient underwent percutaneous transluminal angioplasty, with a significant decrease in the level of consciousness during

post-anesthetic recovery, requiring intubation and transfer to an intensive care unit bed.

During hospitalization, an arterial resonance angiography of the skull and neck (04/28/2022) was performed, which showed an area of recent ischemia involving the left half of the pons and the upper left portion of the cerebellar vermis with significant thinning of the basilar artery, notably in the middle and distal segment, with a longitudinal extension estimated at about 1.5 cm.

After clinical improvement, extubation was successfully performed, however, patient V.S.N had quadriplegia and cranial nerve palsy, preserving only the function of the oculomotor nerve, which allowed her to communicate strictly by blinking her eyes, directing the diagnosis. for Lock-in Syndrome.

DISCUSSION

As presented in the reviewed articles, the most common cause of the Imprisonment Syndrome is the bilateral pontine lesion, with preservation of the dorsal region of the midbrain and the cortex, which justifies the maintenance of the longitudinal movements of the eyes, since this is where the supranuclear motor pathway and the permanence of higher cortical functions, corresponding to the clinical alterations presented. Furthermore, the result of the Imprisonment Syndrome can still be due to a mesencephalic lesion, although less frequent. From this perspective, among the vascular pathologies, basilar artery occlusion and pontine hemorrhage are the most recurrent etiologies, in addition to traumatic brain injury and tumor compression (FILHO et al., 1982; RESENDE et al., 2020).

In addition, as reported in the angiography performed on 05/03/2022, the patient presented a critical stenosis of the basilar artery in its entirety, which occluded the vessel lumen in eighty percent (80%),

explaining the ischemia of the affected areas.

Based on the above, the patient was alert, in contact, and anarthric, a characteristic picture presented in the incarceration syndrome, when the suspicion was confirmed in the imaging tests performed.

Although there is no specific treatment at the moment, the patient is in a referral service accompanied by a multidisciplinary team with support measures and awaiting a definitive feeding route.

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