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Cerebrovascular Accident (Stroke) Activated by Guillain Barre Syndrome

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Abstract

Mature adult, who presented a sudden clinic picture with lack of muscle strenght in his lower limbs, who already suffered from secondary, left hemiparesis to complete occlusion of the right carotid with subsequent embolisation to the cerebral media in the same side. The admission diagnosis were: 1) Guillain Barré Syndrome and 2) sequels of an ischemic cerebrovascular accident (CVA). That both pathologies co-exist together is what makesthis case interesting since is not common and most surprising, when the myelinazation started in the recovery from the Guillain Barré Syndrome, the spasticity, peculiar of the CVA, suffered three years ago, reappeared. Another interesting aspect was the interdisciplinary management given, from the medical view (neurosurgery, physiatry, psychiatry) and the biopsichosocial view (physical rehabillitation with mixed methodologyof Doman Delacato and Bobath in addition to a Psychosomatic Psychoanalytic management), due to the complexity of the case with a psychological impact as both neurological pictures were sudden and sequential. The unique case found in the medical literature of an acute occlusive cerebrovascular accident, very quickly followed by a Miller Fish Syndrome (variant of Guillain Barré Syndrome) was recently reported; the syndrome as such, appeared later, exacerbanding the previous CVA. According to our knowledge, that is what makes this case unique. Practical teaching is that the patient's recovery and labor reinsertion were due to an inter-disciplinary and multi-dimensional management with a comprehensive biopsychosocial approach, used.

Keywords: Ischemic cerebrovascular accident (CVA); Dolman Delacato and Bobath Method; Psychosomatic Psychoanalitics; Guillian Barré Syndrome

Introduction

Guillain Barré Syndrome is an acute inflamatory polyradiculoneurophaty [1-6] with a great variety in clinic presentations. The originally named "ascent paralysis" is the most common, which in turn can only compromise the myelin and motor axons (AMAN) while other presentations like the one shown by this patient, compromise the myelin as well as the motor axons. In the Western countries, the demyelinating (AIDP) [2] is more frequent. The Guillain Barré's anual incidence varies between 0,4/100.000 in Brazil to 2.5/100.000 in Curazao [2]. It has a big economical impact on the health systems with costs around US318,966 per patient and is more frequent in men than in women. Reports in Colombia only register case increases between 2015 and 2016 (86 cases, triplicating the number of cases in the past 7 years), relating to Zika epidemy[3]. Additionally, the ischemic cerebrovascular disease in Latin America shows an incidence between 0,89 and 1,83 per 1000. In a study in Sabaneta, Colombia, an anual incidence of 0,89/1000[4], adjusted by age and gender, was found in a population with 13.588 subjects.

According to the above described, the incidence of these two diseases is very low and even more rare, their simultaneous onsets, finding only one report of a Guillain Barré Syndrome followed by an ischemic CVA, induced by high temperatura (>40°) [5] and two cases of Guillain Barré Syndrome associated to a haemorrhagic CVA [6] with different presentation and pathogenesis sequences. Therefore, this present case-report of a Guillain Barré Syndrome is unique because it appeared 30 months after an ischemic CVA in a patient suffering from the stroke sequels and most surprising was the exarbetion of the CVA clinic picture, once the myelinatation started.

Clinic Presentation

The patient was a 52 year-old male, mestizo, medical doctor (Family Medicine) by profession. His clinic history mainly reported a chronic migrain, evoluting for many years. His brain resonances at the diagnosis and control times were normal. He had no personal history of arterial hypertension, diabetes mellitus and active dyslipidemia. His family background included an uncle with aortic aneurysm (abdominal aorta); his father with popliteal artery aneurysms and three-vessel coronary artery disease. In December 2014, the patient suddenly presented dysarthria, which made him to have an angioresonance in a hospital for highly complex cases. He was diagnosed with a complete occlusion of the right internal carotid artery, about 7,7 mm distal to the carotid bifurcation.

He was hospitalized in an intensive care unit (ICU) to receive fractional Heparin and Warfarin as anti-coagulants. Fifteen hours after the administration of the anti-coagulants, a neurological impairment was evident with signs of somnolence, right central facial and hemiplegia. After the assessment performed by the neurosurgeon, treating the case, a cerebral Pan-angiography with mechanical thrombosis with solitter, an intra-arterial thrombosis with TPA with catheter implantation were immediately made. The patient remained 5 days in the ICU showing a satisfactory general evolution suffering from sequels as left hemiparesis[6], right central facia and right cuadrantonopsia. The patient did physical, occupational and speech therapies for 18 months, recovering his walking ability (though showing hemiparetic features), left arm movility and mouth centralization.

18 months later, the patient suddenly was not able to rise up from the floor as his lower limbs were completely weak and little by little his upper extremities were compromised. He never had breathing or swallowing problems. Immediately, he was to his treating physician, who before this picture (acute flaccid quadriplegia in addition to a lack of osteotendinous reflexes), diagnosed Guillain Barré Syndrome. He took the patient to an ICU to infuse him with dehypergammaglobulin (intrathecal) (0,4g/kg/day) for 5 days. The patient's neurological evolution was satisfactory, recovering first his muscle strenght in hisright hemi-body. The left side remained hemiplegic during the hospitalization, which lasted 12 days.

He was discharged from hospital and an ambulatory, comprehensive, inter-disciplinary management was conducted with physical therapies (with an intensity of 2 times a week, each 3 hours), which aimed to giving back to him his walking ability using the Doman Delacato [6] and Bobath Method. He also reassumed his occupational therapies, specially forhis right hand (with same time intensity) and to be treated emotionally, he re-asummed his therapy based on the Psychosomatic Psychoanalysis [7] with an (intensity of one hour a week for more than six month). During the patient's evolution, it was seen that when clinically, the myelination returned to his nerves (the osteotendinous reflexes re- appeared), his left hemi-body recovered the former spasticity of the CVA. Another event seen was that the left hemi-body, doubly attacked (by the CVA and the Guillain

Barré Syndrome), showed a late recovery in relation to the right hemi-body. All the time, during the patient's two acute crisis and his recovery, he counted on the psychosocial support from his wife, who gave him care and his only child (a boy). They were his closest and intimate family group, which is associated with the genetic activation in resilience [8].

Discussion

Particular to this case, it is its singularity in the medical literature reporting a patient witha sequel caused by an upper motor neuron injured (embolism to a right cerebral media after a complete occlusion of the carotid artery in the same side), befell months later and the appearance of an acute injure in the upper motor neurons (i.e. an acutepolirradiculoneuropatia with axonal and demyelinating component), when the patient was recovering from the sequel of a high-cerebro damage.

The clinic sequence shown is an essential aspect, which deserves to be stressed: first, in the physical exam (initially, with the CVA, the spasticity of the left hemi-body and the tendonous hyperreflexia in the same size), then, in the Guillain Barré onset, a change into an extreme flaccidity in that hemi-body and disappearance of the tendonous reflexes and finally, in the myelinating of the nerves of that hemi-body, the re-appearance of the spasticity while the tendonous reflexes reappeared to a normal intensity of two crosses. Thanks to an inter-disciplinary management, the patient, finally stabilized, being able to re-assume his labor activities with some limitations. The psychosocial support is importantin these cases as it is known how bacteria and virus are associated to the Guillain Barré Syndrome and that the immune system's functional activity is related to the centralnervous system and a genetic component [9].

The sequence of the second pathology could be associated with the cellular immune changes of the chronic stress, which can be understood in a young patient with an acute picture,which caused a personal and family crisis for an unexpected event, situation biologically plausible within the endocrinopsiconeuroimmunology field [10], achieving a good outcome by the integrative, integral, inter-disciplinary intervention, peculiar competences of the Family Medicine. It is admitted that resilence takes place with the genetic activation, especially when the family environment is closed and strong, providing psychosocial support [11]. It is known for long time how the lack of phychosocial support is related a very significant increase in IL-6, TNFα and other inflammatory substances, that damage the function of the vascular endothelium [12]. On the contrary, an environment witha strong psychosocial support not just prevent the increase in pro-inflammatory substances but it enhances the function of the vascular endothelium, which releases nitric oxide, a potent vasodilator, which regulates the endothelin (potent vasoconstrictor) levels, maintenancing the vasomotor tone and antiaterosclerotic, to our criterium, essential for recovering in this particular case.

As can be seen, this is a case of interest for its presentation and clinic evolution and complete rehabilitation, using an integral and integrative management by the health equipment and the resilience observed. We consider that the psychosocial support given by the patient's closed family nucleus was a help with the genetic myelination of the resilience, an event recently documented in the literature. On the other hand, according to our knowledge, the only case found in the literature of an acute, occlusive cerebrovascular accident, very quickly followed by a Miller Fish Syndrome (variant of the Guillain Barré Syndrome) was recently reported[13] but that the syndrome as such appeared later, exacerbanding the previous cerebro vascular accident, is what makes this case unique [14,15]. The practical teaching is that the patient's recovery and labor re- insertion were due to an interdiscilinary and multidimensional management [16] using a comprehensive biopsychosocial approach and the resilience developed by the patient.

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