



NEUROMUSCULAR REHABILITATION INTERVENTIONS AND COVID-19 MANAGEMENT IN A CASE OF INCOMPLETE PARAPLEGIA AND NEUROGENIC BLADDER POST T3-T5 EPENDYMOMA – CASE REPORT

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Balneo and PRM Research Journal

DOI: <http://dx.doi.org/10.12680/balneo.2021.452>

Vol.12, No.3 September 2021

p: L104

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Abstract

Introduction. Spinal ependymomas are a group of mostly slow-growing tumors that can cause non-traumatic spinal cord injuries with insidious clinical symptomatology ranging from neck or back pain to associated sensory-motor impairment. Due to their neurological and systemic frailty, patients with spinal cord injuries might be especially vulnerable to the effects of SARS-CoV-2 infection and the resulting respiratory impairment.

Case Presentation. We present the case of a 66 year old women admitted in our Neuromuscular Clinical Division for severe incomplete paraplegia and neurogenic bladder, due to a thoracic myxopapillary ependymoma that was surgically removed by gross tumor resection. During the neurorehabilitation program the patient was diagnosed with COVID-19 and the radiological findings confirmed a moderate illness. The neuromuscular rehabilitation interventions were associated with conservative respiratory rehabilitation techniques, together with pharmacological treatments and oxygen therapy.

Results. The patient had a non-severe COVID-19 evolution followed by a favorable neurological rehabilitation, consisting of walking abilities on short distances with support in walking frame and from the physical therapist.

Conclusions. The prophylactic anticoagulation therapy could have been one of the important advantages that the patient and the medical team had against COVID-19, in addition to the prompt diagnosis and complex treatment allowed by hospital care, including respiratory rehabilitation. The restrictive respiratory impairment caused by the loss of innervation to the abdominal muscles, diaphragm and/or intercostal muscles might be worsened by other SARS-CoV-2 lung sequelae. Thus, the respiratory disorders and also associated dysfunctional neurogenic bladder may worsen the patient’s long-term prognosis.

Keywords: *spinal myxopapillary ependymoma, non-traumatic spinal cord injury, SARS-CoV-2 infection/ COVID-19, pneumonia, neuromuscular rehabilitation, respiratory rehabilitation, prophylactic anticoagulation therapy.*