

## IMPROVEMENT OF NON-HODGKIN'S NEUROLYMPHOMATOSIS CRITICALLY DEPENDENT ON RITUXIMAB THERAPY

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Neurolymphomatosis is a rare manifestation of non-Hodgkin's lymphoma (NHL) caused by intraneural infiltration of malignant lymphocytes. We report on a patient with neurolymphomatosis who dramatically responded to rituximab. A 59-year-old woman was admitted for progressive weakness, paresthesias and sensory loss at the lower limbs. She had been diagnosed with a follicular NHL at age 53, after a bone marrow biopsy done to ascertain the incidental finding of thrombocytopenia. Being the lymphoma indolent, a wait-and-see strategy was adopted. Neurophysiological evaluation revealed sensory-motor neuropathy with relatively preserved conduction velocities and evidence of muscle denervation. CSF analysis was unremarkable. Lumbosacral spinal MRI revealed mild enhancement of the cauda equina roots. Total-body CT-PET was negative. The patient underwent monthly therapy with IVIg (2 g/kg), but she progressively worsened and became wheel-chair bound; upper limbs were severely impaired and she was incapable of writing, combing her hair or buttoning up. Sural nerve biopsy showed axonal neuropathy with epineural perivascular infiltrate of monoclonal (PCR analysis) B cells. Neurolymphomatosis was diagnosed and rituximab started with prompt improvement. After three months she relapsed, and rituximab maintained twice-monthly. Four months later she was able to walk independently for three miles. She regained full functionality at upper limbs, being able to sew, write, and buttoning up. She continued on rituximab for two years with persistent benefit. The histopathological findings of epineural clonal B cell infiltration in the absence of systemic evidence of lymphoma strongly indicate that the lymphoproliferative process was restricted to the peripheral nervous system. The dramatic improvement after rituximab further supports a direct role of the lymphoma in the neurological manifestations and points to an early rituximab therapy in this uncommon neurological disorder.