

# Hashimoto's encephalopathy, axonal neuropathy and membranoproliferative glomerulonephritis type I: an unusual association.

Jolanda De Caro, F. Biasini, S. Galletta, A. Alfonzo, A. Mazzeo, P. Girlanda

Department of neuroscience – University of Messina- Italy

## Introduction

Hashimoto's encephalopathy (HE) is a subacute, steroid-responsive, relapsing-remitting encephalopathy usually presenting with altered mental status and/or altered level of consciousness, stroke-like episodes, epileptic seizures, headache, ataxia, associated with Hashimoto's thyroiditis and increased antithyroid antibody levels. Cases of Hashimoto's encephalopathy together with demyelinating peripheral neuropathy have been reported [1]. Our group described a patient affected by multifocal motor neuropathy and asymptomatic Hashimoto's thyroiditis [2]. Moreover a patient with CIDP, Hashimoto's thyroiditis and nephropathy has been published [3]. In such case a possible autoimmune syndrome complex was taken into account [3].

## Case report

A 43-year-old caucasian woman affected by Hashimoto's thyroiditis and chronic renal failure due to membranoproliferative glomerulonephritis type I was admitted to our ward for speak impairment, vomiting, drowsiness, confusion and headache.

It was reported that at the age of 23 she had been diagnosed with axonal neuropathy. At age 41 she had developed muscle weakness at four limbs and mental confusion. In that occasion complete recovery had taken place in about 6 months.

**Neurological examination** revealed mental confusion, mild dysarthria, ataxic gait, positive Romberg test, weakness of lower limbs, right Achilles tendon reflex reduced, vibration sense impairment at lower limbs. Babinski sign was present bilaterally.

**Laboratory tests** revealed high titers of ABTG, ABTPO, ANA and mild increase of CSF proteins.

**Imaging** of brain MRI demonstrated lesions compatible with the diagnosis of HE.

**EMG** revealed axonal neuropathy and **EEG** showed slow rhythms and sharp waves. Broad investigations excluded other possible causes of encephalopathy.

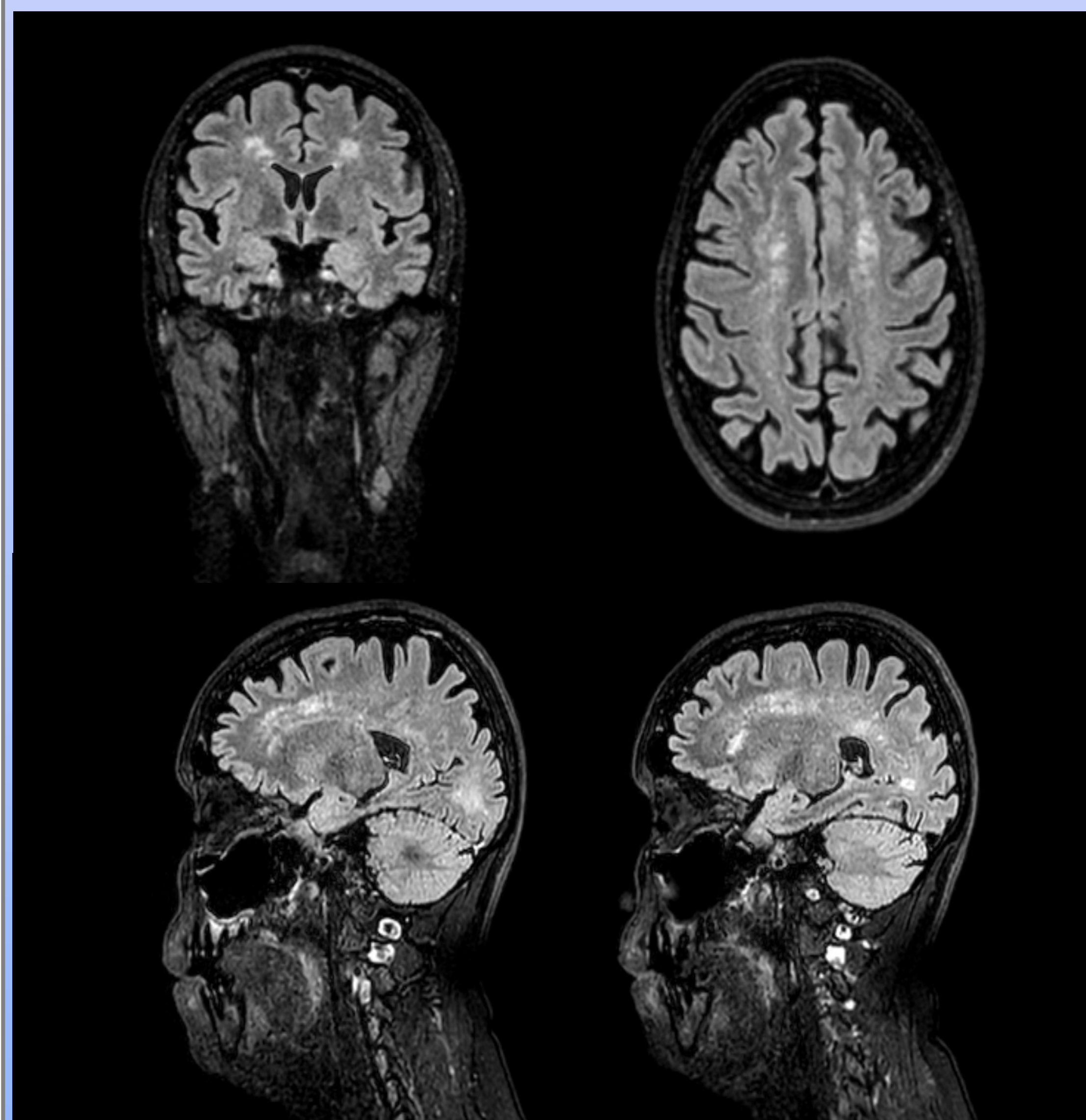


Fig. 1 MR Flair image show multiple injured areas lying in deep frontal, periventricular and occipital white matter. There are signs of mild cortical atrophy.

## Conclusion

It is therefore likely the diagnosis of an association of axonal neuropathy with Hashimoto's encephalopathy and membranoproliferative glomerulonephritis type I as a possible autoimmune syndrome complex. Steroids have induced a rapid improvement of symptoms.

[1]- Sheng B, Lau KK, Li HL, Cheng LF. A case of Hashimoto's encephalopathy with demyelinating peripheral neuropathy. *Eur Neurol.* 2005; 53:84-5.

[2]-Toscano A, Rodolico C, Benvenga S, Girlanda P, Laura M, Mazzeo A, et al . Multifocal motor neuropathy and asymptomatic Hashimoto's thyroiditis, first report of an association. *Neuromuscul Disord* 2002;12:566-8].

[3]- CIDP, Hashimoto's Thyroiditis and Nephropathy: Autoimmune Syndrome Complex?

S Raghavendra, S Sanjay, R Somashekar, R Ashalatha, SK Shankar *Can. J. Neurol. Sci.* 2009; 36: 382-384