OPSOCLONUS, MYOCLONUS AND ATAXIA RESPONSIVE TO STEROIDS: A CLIPPERS-LIKE CASE

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INTRODUCTION

Chronic lymphocytic inflammation with pontine perivascular enhancement responsive to steroids (CLIPPERS) is a relapsing-remitting inflammatory disease characterized by a significant response to corticosteroid therapy, contrast-enhanced punctiform lesions on MRI (particularly in the brain stem and cerebellum) and perivascular T-lymphocyte infiltration revealed by histopathology.

CASE DESCRIPTION

CLINICAL HISTORY

We describe the case of a 32–year-old man who subacutely developed vertigo followed by generalized tremor, progressive postural instability and gait ataxia. He moreover presented nausea and vomit resulting in lack of appetite and a weight loss of 15 Kg in three months. He underwent to neurological examination, blood tests, EMG/ENG study, lumbar puncture and several radiological studies.

NEUROLOGICAL EXAMINATION

The neurological examination showed opsoclonus, dysarthria, a severe bilateral postural and kinetic limb tremor, multifocal myoclonus and ataxia.

RESULTS

LABORATORY TESTS

BLOOD TESTS

- *Comprehensive metabolic panel*: normal
- *Coagulation panel* (Cardiolipin and Beta2 Glycoprotein I antibodies, LAC)*:* normal
- *Vitamin D, vitamin B12 and folate test*: normal
- *Infectious disease test* (Mosaico Sandfly Fever Virus, West Nile Virus, Enterovirus, VZV, HSV 1-2, HHV6, CMV, EBV, HBV, HCV, HIV, Borrellia Burgdoferi, Treponema Pallidum): negative
- *Celiac disease screening*: negative
- *Paraneoplastic antibodies* (anti - GAD, NMDA-R, VGCC, VGKC, AMPA-R 1 e 2, Caspr2, GABA-R B1, LGI1, Amphiphysin, CV2, PNMA2, Ri, Yo, Hu): negative
- *Autoimmune disorders panel* (ANA reflex, ANCA, rheumatoid factor, Anti Ach-R Ab, Anti THS-R Ab, cryoglobulinemia, ACE: negative
- *Tumor markers* (CEA, CA 19-9, NSE, CA 21-1, PSA, Beta-2 microglobulin, alpha feto protein, PTH, calcitonin, chromogranin A): NSE 22 ng/ml (vn < 20), all the rest negative

CSF ANALYSIS

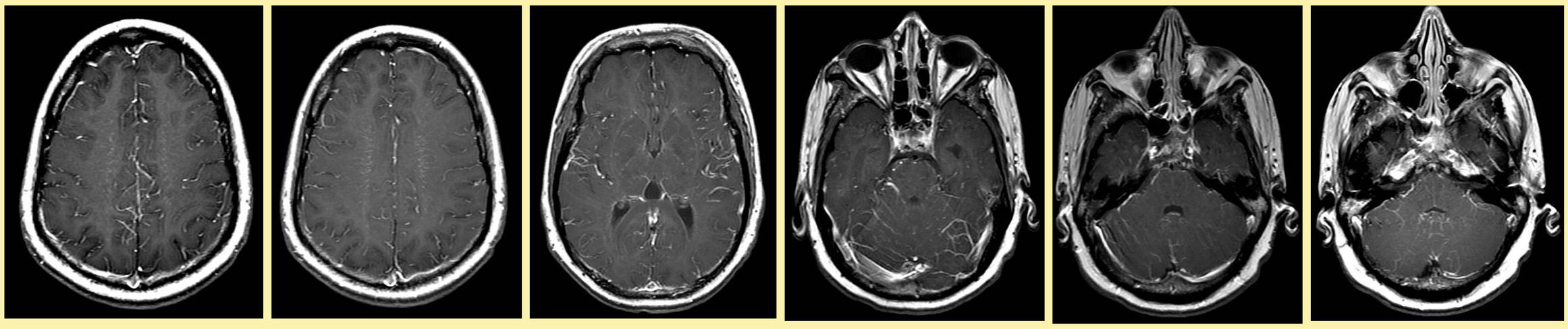
- *Cytochemical examination*:
  - elevated protein levels (85 mg/dl, nr < 50)
  - predominant lymphocytic pleocytosis (26/mmc, nr < 5)
- *Cytology*: negative
- *Research of oligoclonal bands* (serum and CSF): negative
- *Infectious disease tests* (HSV1 e 2, HHV6, VZV, EBV, CMV, ENTEROVIRUS RNA, West Nile Virus, Toscana Virus): negative

OTHER STUDIES

- *EEG*: normal
- *EMG/ENG*: normal
- *Thoracic CT*: normal
- *Scrotal ultrasound*: normal
- *Whole body PET scan*: negative
- *Duodenal biopsy for Whipple Disease*: negative

BRAIN MRI

Post-contrast T1 weighted sequences

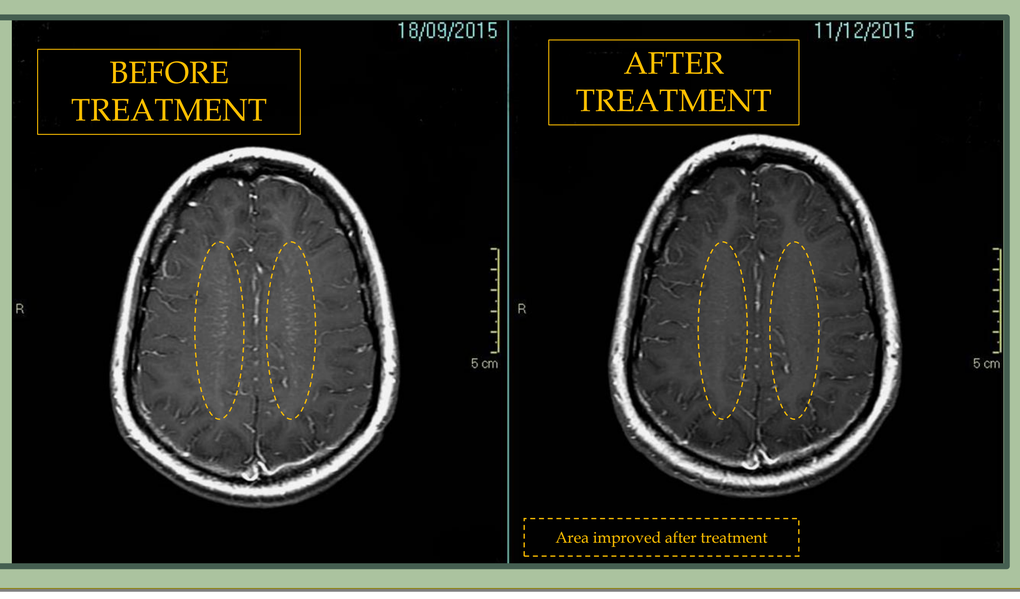


Post-contrast T1 weighted sequences showed diffuse punctate gadolinium enhancement with a perivascular pattern mainly in the bilateral centrum semiovale, ventricular trigone and cerebellum

THERAPIES AND CLINICAL RESULTS

A diagnosis of autoimmune encephalitis was established and the patient was treated with IV immunoglobulin (IVIG, 22 g/die for 5 days), with only partial improvement. Furthermore, a therapy with oral prednisone (40 mg/die) was started, with a marked improvement of symptoms. After 3 months of steroid treatment, we performed a brain MRI that showed a reduction in contrast-enhanced lesions, mainly in the supratentorial compartment (*Figure 2*). Because of the onset of side effects, such as behavioral symptoms and insomnia, the steroid treatment was tapered off to 20 mg/die resulting in the gradual reappearance, over three months, of myoclonus, ataxia, and limb tremor. Symptoms reversed after a new cycle of IVIG (25 g/die for 5 days), keeping the corticosteroid therapy (prednisone 20 mg/die) as maintenance treatment. The patient has remained asymptomatic to date.

Post-constrast T1 weighted sequences before and after steroid treatment. Note the reduction of the contrast-enhanced lesions at level of the centrum semiovale bilaterally.



DISCUSSION AND CONCLUSION

Our case could represent an atypical form of CLIPPERS. Indeed, the MRI of the patient showed contrast-enhanced lesions resembling those reported in CLIPPERS cases, although with a prevalent involvement of cerebellum and subcortical white matter and minimal of the brain stem. Furthermore, we observed a clear-cut clinical and radiological improvement with corticosteroid therapy. Differently from previous reports of inefficacy, IVIG was partially useful to control the symptoms in our patients, but only in association with corticosteroids.

References:

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