Acute sensory irreversible neuronopathy related to Adalimumab: a direct toxic drug effect.

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INTRODUCTION

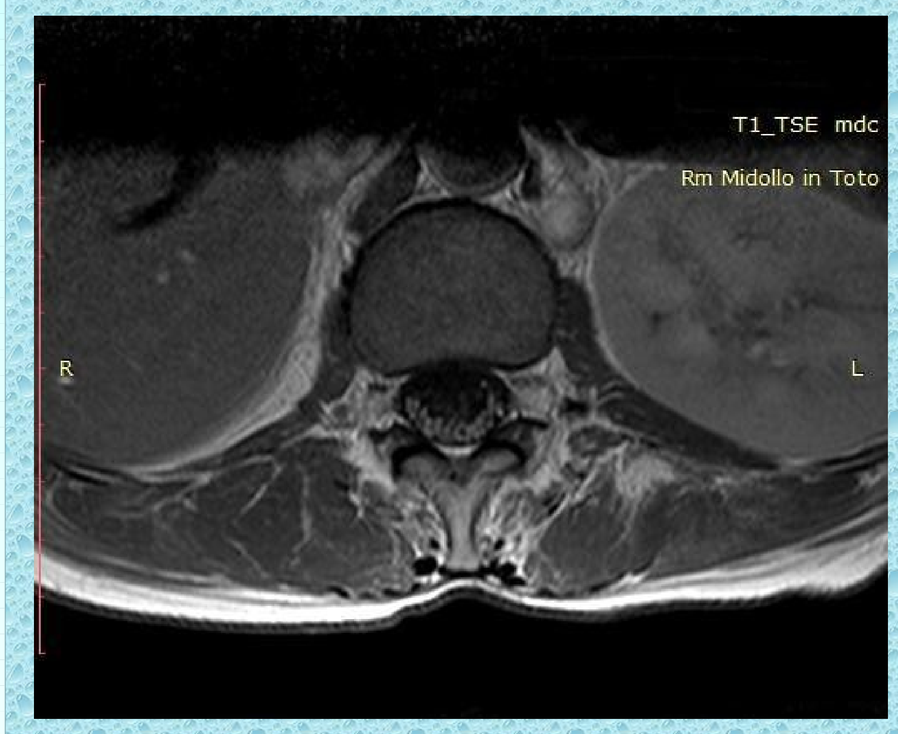
Treatment with TNF inhibitors is infrequently associated with peripheral neuropathies. Histopathological studies show mainly a sensorimotor demyelinating damage, although axonal involvement is also possible. We studied a patient with the hyperacute onset of sensory neuronopathy related to the use of the TNF inhibitor Adalimumab.

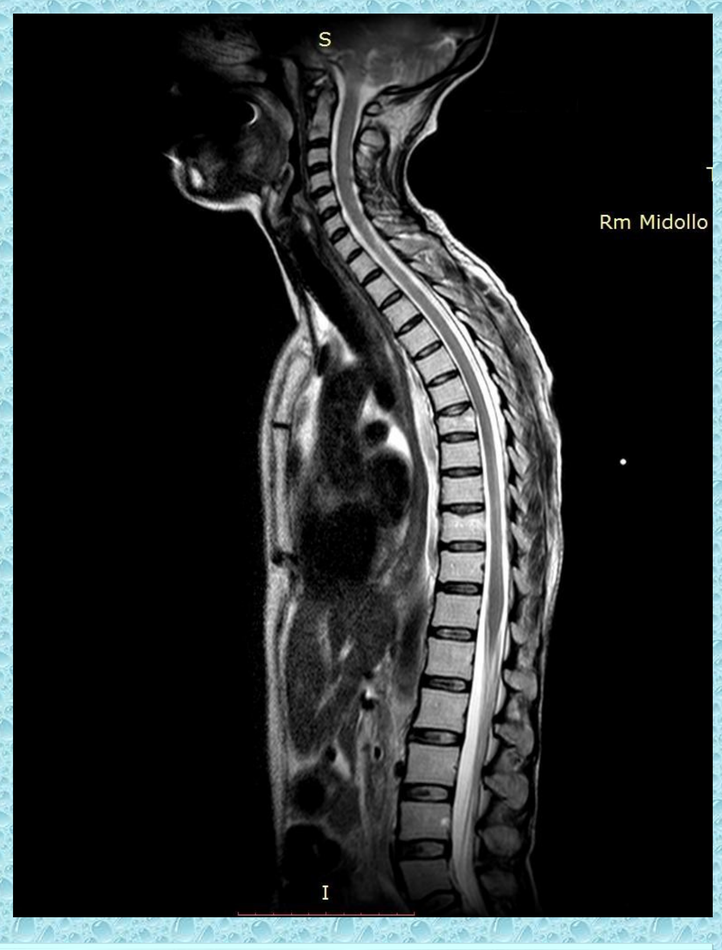
CLINICAL CASE

A 45-year-old woman affected by seronegative rheumatoid arthritis without neurological manifestations, started on Adalimumab 40 mg every second week. About 8 hours after the first injection of Adalimumab the patient complained of paresthesias in both hands. Few hours after the 2nd injection paresthesias involved feet and progressed proximally to all limbs and trunk with appearance of severe sensory ataxia without motor deficits.

METHODS

- *ENG ANALYSIS:* absence of median, ulnar and sural SNAPs.
- *CSF ANALYSIS:* elevated protein (130 mg/dL).
- *MRI STUDY*: increased T2 signal intensity in dorsal columns of the entire spinal cord, with post-contrast enhancement of dorsal roots.





Results:

Discontinuation of Adalimumab and treatment with Ig IV and steroids induced a mild improvement. Subsequently clinical condition remained stable at one year of follow-up.

Conclusion

To our knowledge, we document the first instance of acute sensory ataxic neuropathy with irreversible lesion of sensory neurons in dorsal root ganglia and centripetal Wallerian degeneration in association with the TNF inhibitor Adalimumab.

The rapid onset of symptoms led us to hypothesize a direct toxic effect of this monoclonal antibody on the neurons of dorsal root ganglia. We consider also the possibility that preexisting production of autoantibodies targeting dorsal root ganglia could have been amplified by inhibition of TNF.

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