ACUTE MOTOR AXONAL NEUROPATHY AND TRANSVERSE MYELITIS OVERLAP: A CASE REPORT.

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Background. Acute motor axonal neuropathy (AMAN) in Western countries is an unusual variant of the Guillain-Barré syndrome (GBS), accounting for 3 to 5% of cases [1-2]. The association between AMAN and acute transverse myelitis (ATM) occurs rarely in young adults [3].
We report the case of a 26-year old Caucasian woman diagnosed with overlapping AMAN and ATM, both occurring two weeks after a flu-like illness with diarrhea.

Methods. Serial electroneurographies (ENGs) and electromyographies (EMGs) were performed. AMAN diagnosis was based upon electrodiagnostic criteria [4].
IgG and IgM anti-gangliosides antibodies were assayed by ELISA.

Results. ATM was suspected on the basis of tactile superficial hypoesthesia with a D8-D10 level and urinary retention; the diagnosis was confirmed by magnetic resonance imaging (MRI) of the spine, showing a marginal anterior segmental enhancement at the D12-L3 level (*Figure 1*). GBS was suspected in the presence of distal weakness in all four limbs, beginning distally in the legs and spreading up to the upper limbs. AMAN diagnosis was based on the electrophysiological findings. Serum anti-GM2 and GM3 antibodies were found.
The patient was treated with intravenous immunoglobulin therapy, with progressive improvement of limbs weakness and of the sensory disturbance. The patient was followed-up to one year. At that time the neurological examination showed residual mild distal weakness in the upper and lower limbs and tactile superficial hypoesthesia in the distal segment of the right leg. Urinary retention persisted. Serial electroneurographies (*Figure 2*) were performed and the diagnosis of AMAN was confirmed. Nerve conduction studies at 1 and 6 months and at 1 year after discharge showed a mild but progressive improvement of the CMAPs in the motor nerves. A follow-up spinal MRI performed 9 months after discharge, documented a moderate reduction of the marginal anterior segmental enhancement area.

Conclusions. The case we report emphasizes the rare but possible association between AMAN and ATM. The concomitant involvement of the peripheral nervous system and of the spinal cord, together with the radiological and electroneurographic findings, should drive to the correct diagnosis. Muscle limb weakness with a progressing upward trend, associated with urinary retention and a sensory level, should be considered as a red flag.

Figure 1. Radiological findings of the patient.

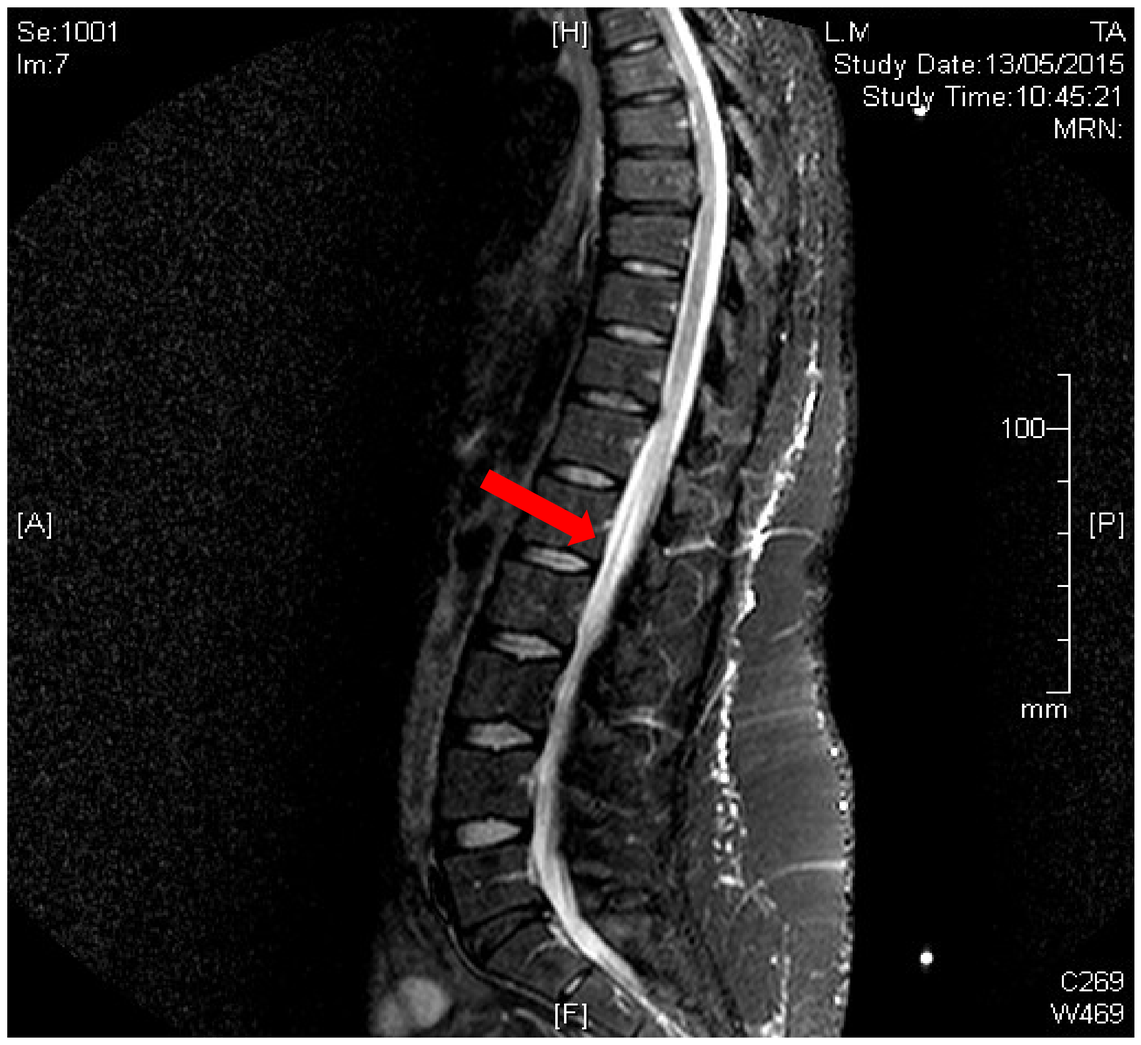
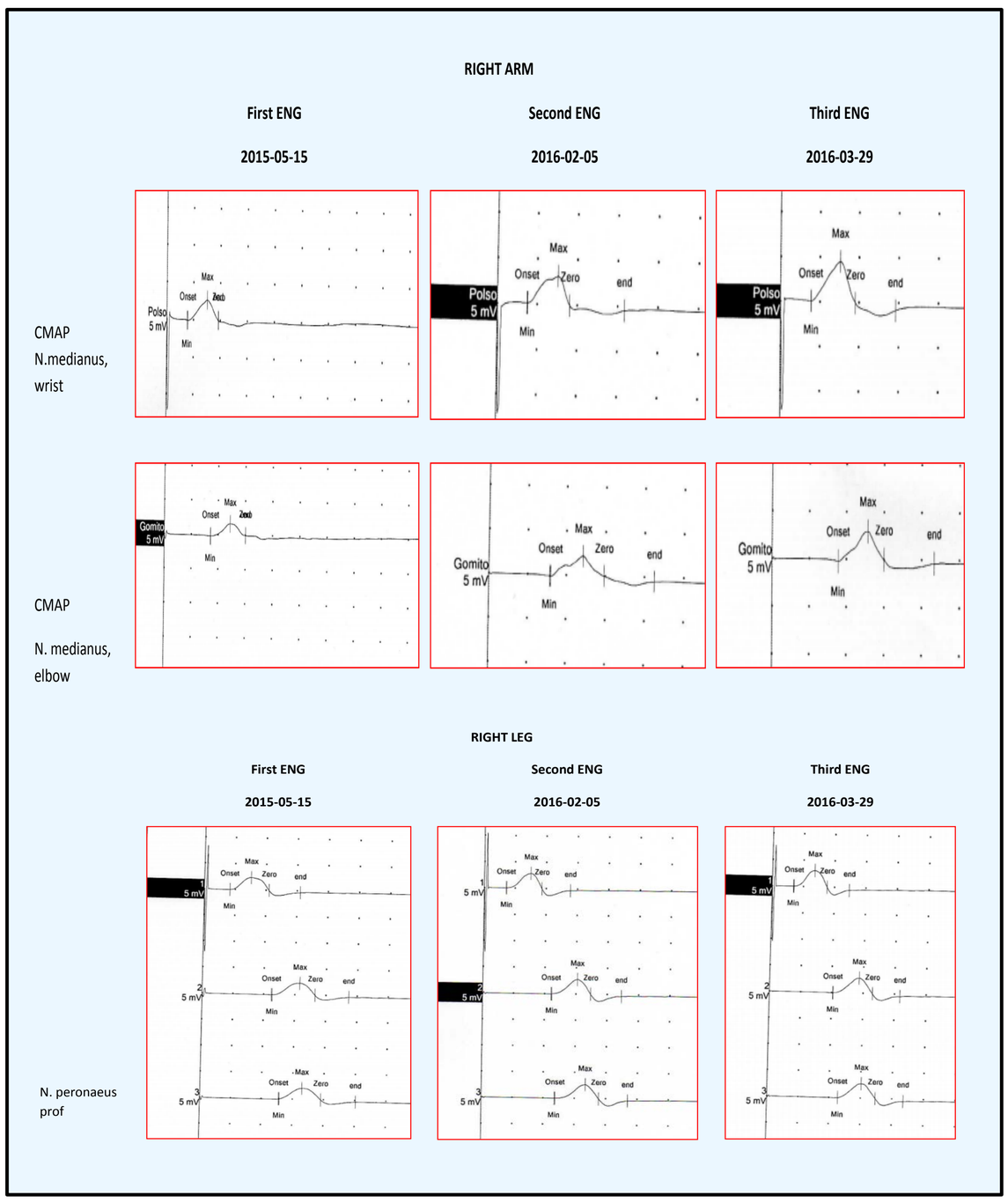


Figure 2. Findings of serial ENoGs of the patient.



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