ALS Reversals: Demographics, Disease Characteristics, Treatments and Co-Morbidities

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Objective:
To describe clinical features of patients with ALS reversals and compare these to patients with typically progressive ALS.

Background: There exists a small group of patients who appear to have ALS, progress for a while and then significantly improve. Some of these “ALS reversals” even make a complete recovery to normal neurological function. Study of these patients may yield valuable clues to endogenous mechanisms of ALS resistance or even alternative treatments that work. There is a precedent for this idea; study of a group of patients who could “control” HIV led to an improved understanding of HIV pathophysiology and a new treatment.

Design/Methods:
This was a case-control study. Cases had confirmed diagnoses of ALS and significant reversal. Controls were patients with typically progressive ALS in the PRO-ACT database. Comparisons of demographics, disease characteristics, co-morbidities, and treatments were made between these groups using simple descriptive statistics.

Results:
24 cases of ALS reversals were compared to 12,058 controls in PRO-ACT. Cases were more likely to be male (OR=3.9) and have disease onset in the limbs (100% of cases versus 74% of controls). Convincing upper motor neuron signs were absent in 21% of cases, compared with estimates that PMA accounts for only 5% of all MND. 2 cases had a past medical history of Myasthenia Gravis and another 2 cases experienced flu-like illnesses around the time of diagnosis.

Conclusions:
For the first time, we have compiled all known cases of ALS reversals into a database that can be used for further study. Preliminary analysis shows that these patients differ in their demographics, disease characteristics, and co-morbidities as compared to controls. Further study is warranted to complete and confirm the work-ups for ALS mimic disease in these patients and to determine if genetic differences between these patients and those with typically progressive ALS could account for disease resistance.

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