CT IMAGING IN ADVANCED AMYOTROPHIC LATERAL SCLEROSIS

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Introduction: Amyotrophic lateral sclerosis (ALS), traditionally considered as a disorder limited to the motor system, is increasingly recognized to be a disease involving associative areas in addition to the motor cortex. ALS patients may present with a frontotemporal dementia. New clinical findings suggest a connection between ALS and Frontotemporal Dementia. It is unknown that ALS-dementia is different from ALS in very advanced condition.

Aims: The aim is to identify characteristic of brain imaging of CT in relatively advanced ALS patients.

Methods: We performed head CT examination in 29 cases of clinically definitive advanced ALS patients. No patients had a familial form of the disease. All patients had received trachiotomy with respirator, and lost voluntary speech and severely impaired physical ability. Three patients had showed clinically dementia.

CT; Toshiba, Aquilion 16, OM-line, 5 mm - slice

Results: All patients demonstrated cortical atrophy in the frontal and anterior temporal cortices, even if dementia was not detected clinically. The frontotemporal involvement is very severe when dementia was observed clinically.

Patients, who can not communicate, likely to show marked frontotemporal atrophy. As the disease progress, the communication ability became difficult or impossible. And the frontotemporal involvement is severer in these communication impossible group.

Conclusion: It is suggested that in ALS, the frontotemporal involvement became evident eventually, nevertheless the presence of dementia.