

## Onset of ALS and PSP during the course of schizophrenia

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### Introduction

A patient experienced schizophrenia with the complication of amyotrophic lateral sclerosis (ALS) during treatment. Cervical dorsiflexion, limb consolidation and dystonia emerged after antipsychotics were discontinued at the onset of pneumonia. From this, it seemed that progressive supranuclear palsy (PSP) also occurred. In the present report, we discuss the pathognomonic mechanism.

### Case report

A 68-year-old man was admitted to Tokushima Hospital on June 15, 2011 due to muscle weakness throughout his body. He had developed schizophrenia at the age of 46 and was receiving medical treatment in a psychiatric department. Body weight loss and fatigue emerged from the autumn of 2009 (when he was 60 years old). In 2010, the decline of the limb muscle strength increased and he could not stand independently. In November of the same year, dysarthria appeared and aspiration pneumonia developed. In February 2011, a doctor diagnosed the patient with ALS. The university hospital also gave the same diagnosis.

In Tokushima National Hospital that patient's height was 172 cm and weight was 68 kg. From around October 2017, the cervix was retroflexed, and the limbs contracted strongly. In a head MRI examination. In addition to atrophy of the cerebral cortex, the brain stem was atrophied in the Sagittal image with the anterior / posterior diameter of the

midbrain middle of 9.4 mm and the area of 88 mm<sup>2</sup>. (Figure 1)

### Discussion

Frontotemporal degeneration (FTD) is a common form of dementia, especially in individuals less than 65 years of age at the time of diagnosis. FTD typically comprises three distinct clinical syndromes: behavioral variant frontotemporal degeneration (bvFTD), and two primary progressive aphasia (PPA): semantic variant primary progressive aphasia (svPPA) and a non-fluent variant primary progressive aphasia (nfvPPA). There are also three other neurodegenerative syndromes that frequently overlap both clinically and neuropathologically with FTD: corticobasal syndrome (CBS), progressive supranuclear palsy (PSP) and amyotrophic lateral sclerosis (ALS) [1].

This patient had schizophrenia and had been taking antipsychotic medication for many years. Then a strange phenomenon occurred by which Parkinsonism developed after medication therapy was discontinued. There has been no report on combining ALS and PSP for schizophrenia. In this example, symptoms similar to schizophrenia may have been partial symptoms of FTLD.

### References

1. Seltman R, Matthews B. Frontotemporal lobar degeneration: epidemiology, pathology, diagnosis and management. *CNS Drugs*. 2012;26:841-870.

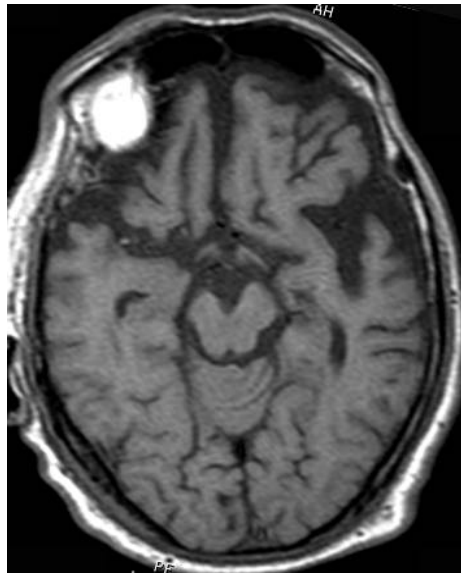
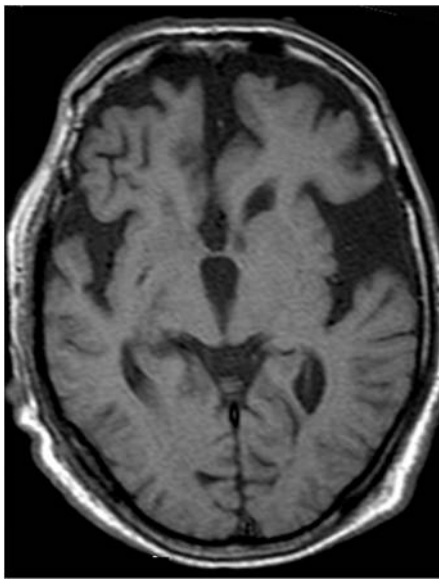


Figure 1. Brain MRI.  
A and B, Coronal section  
C, Sagittal section