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## Amyotrophic lateral sclerosis combined with Hashimoto's thyroiditis : A case report

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### - Abstract -

Although the etiology and pathogenesis of amyotrophic lateral sclerosis(ALS) is unknown, increasing evidence supports a role for autoimmune mechanisms in motor neuron degeneration. The coexistence of immune disease in ALS supports that an altered immune system may contribute to disease pathogenesis. A 55-year-old woman was admitted to our department due to dysarthria and gait disturbance. On physical and neurologic examination, she showed thyroid enlargement, tongue atrophy, muscle weakness, fasciculation, and increased deep tendon reflex. The electrophysiological studies are compatible with motor neuron disease. Cytological findings of thyroid were compatible with Hashimoto's thyroiditis. Thus, we report a case of ALS combined with Hashimoto's thyroiditis. And the simultaneous presentation with ALS and Hashimoto's thyroiditis led us to consider whether this was simply a chance association or not.

**Key Words :** Amyotrophic lateral sclerosis(ALS), Hashimoto's thyroiditis, Autoimmune disease

sis, ALS) (amyotrophic lateral sclero-<sup>11</sup>, VGCC ALS 가  
, 가<sup>12</sup> ALS 가  
가<sup>1,2</sup>, ALS 가  
가 ( ) ALS 1  
<sup>3,4</sup> ALS  
<sup>5,6</sup>  
가<sup>5,7,8</sup>  
가  
<sup>9,10</sup>, ALS  
(voltage gated calcium channel, VGCC) 55 1

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, CPK/LDH, (

), (T3, T4, TSH, TBII)

123 mg/dl, 2

212 mg/dl, Hb A1C 6.2%( : 4.4 ~ 6.4)

rheumatoid factor, antinuclear antibody, anti-mitochondrial antibody , anti-GAD antibody

0.07 unit/ml, thyroid microsomal antibody 0.01 unit/ml , thyroglobulin Ab 2.05 unit/ml

, ( CMAP)

CMAP 가

(Table 1).

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, 가

(vastus lateralis muscle)

ALS 가 ALS

가 ( )

3,4가 , Appel 3

ALS 19%

ALS 가 가

가 가

가 thyroglobulin 가

ALS 5,6

가

5,7,8

9,10, ALS VGCC 11,

VGCC ALS ALS 가

12

ALS 가

ALS 가

가,

T 9,10,13

ALS dehydropyridinine(DHP)

, ALS

IgG peak calcium current ALS

total charge movement가 ALS

IgG가 DHP 14

ALS , ALS 75%

가 가

11 VGCC 가

가

ALS IgG

**Table 1.** Nerve conduction study findings in our patients.

Motor Nerve	TL(ms)	Amp(mV)	CV(m/s)
Median(right)	3.5	12.01	53
Ulnar(right)	2.5	13.7	57
Tibial(left)	4.7	3.5*	38*
Tibial(right)	5.2	1.5*	37*
Peroneal(left)	4.1	0.95*	37*
Peroneal(right)	4.0	0.98*	35*

  

Sensory Nerve	Amp(uV)	CV(m/s)
Median(P-W)	62.4	44
Median(F-W)	27.14	44
Ulnar(F-W)	22.13	44
Ulnar(W-E)	37.65	56
Sural(left)	31.2	41
Sural(right)	26.5	36

TL, terminal latency; Amp, amplitude; CV, conduction velocity; P, palm; W, wrist; F, finger; E, elbow  
 \* abnormal finding

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ALS 가  
ALS  
가 ALS  
HLA T- ALS 가  
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