

Case 22 (July 20 2006): [N Engl J Med 2006;355:296-304](#)

Demographic: Male, 77yrs, America North, General speciality

Clinical features extracted from the case and entered into the query box:

ataxic gait
progressive weakness
urinary stress incontinence
increased fatigue
persistent, dry cough
dysarthria
diminished right dorsalis pedis and posterior tibial pulses
On tandem walking fell to either side
diminished vibratory sensation in both lower legs and feet
asymmetric weakness
Widespread fasciculations in the muscles of arms and legs
mild atrophy of the intrinsic muscles of hands
Deep-tendon reflexes hyperactive
some weakness of neck flexion
mild numbness developed bilaterally in the tips of fingers in median-nerve distributions
Babinski sign present

Synonyms used by Isabel (optional) for the above query:

dysarthria

STOP !

Before you read further you might want to construct your own:

- Complete differential diagnosis
- Final diagnosis

In the following section you will find:

- The differential diagnosis constructed by the MGH panel
- The final diagnosis of the case

- Which of the MGH panel differential diagnoses did Isabel contain
- Did Isabel suggest the Final diagnosis

Differential Diagnoses considered by the MGH panel:

- Pure motor syndromes: myeloradiculopathy, vitamin B12 deficiency, luetic meningomyelitis, Intoxication with heavy metals, particularly lead, Polymyositis, Inclusion-body myositis
- Combined Upper and Lower Motor Neuron Disease: Familial amyotrophic lateral sclerosis (ALS), X-linked spinal-bulbar muscular atrophy (Kennedy's disease), Late-onset Tay-Sachs disease, Polyglucosan body disease
- Amyotrophic lateral sclerosis

Final Diagnoses of the case according to NEJM:

Amyotrophic lateral sclerosis

Differential Diagnoses of the case as given by Isabel:

Amyotrophic lateral sclerosis – Isabel 1st page

Polymyositis – Isabel 1st page

Vitamin B 12 deficiency – Isabel 2nd page

Was the final diagnosis given by Isabel:

Yes, Isabel 1st page

Entire presentation cut and pasted into the Isabel query box:

Motor Neuron Disease – Isabel 1st page

Isabel differential:

NERVOUS SYSTEM DISORDERS ∨		
↳ Cervical Spondylosis	<input type="checkbox"/>	<input type="checkbox"/> R
Syringomyelia	<input type="checkbox"/>	<input type="checkbox"/> R
CVA / Stroke	<input type="checkbox"/>	<input type="checkbox"/> R
Spinal Cord Tumors	<input type="checkbox"/>	<input type="checkbox"/> R
Carpal Tunnel Syndrome	<input type="checkbox"/>	<input type="checkbox"/> R
↳ Ataxic Disorders	<input type="checkbox"/>	<input type="checkbox"/> R
Multiple Sclerosis	<input type="checkbox"/>	<input type="checkbox"/> R
Progressive Supranuclear Palsy	<input type="checkbox"/>	<input type="checkbox"/> R
Ekbom's Syndrome	<input type="checkbox"/>	<input type="checkbox"/> R
↳ Myelitis	<input type="checkbox"/>	<input type="checkbox"/> R
Intracranial Hemorrhage	<input type="checkbox"/>	<input type="checkbox"/> R
Diabetic Neuropathy	<input type="checkbox"/>	<input type="checkbox"/> R
Thoracic Outlet Syndrome	<input type="checkbox"/>	<input type="checkbox"/> R
RHEUMATIC DISEASES ∨		
Fibromyalgia	<input type="checkbox"/>	<input type="checkbox"/> R
NUTRITIONAL DISORDERS ∨		
Thiamine Deficiency	<input type="checkbox"/>	<input type="checkbox"/> R
INFECTIOUS DISEASES ∨		
Lyme Disease	<input type="checkbox"/>	<input type="checkbox"/> R
VASCULAR DISORDERS ∨		
Peripheral Arterial Disease	<input type="checkbox"/>	<input type="checkbox"/> R
NEUROMUSCULAR DISORDERS ∨		
↳ Polyneuropathy Disorders	<input type="checkbox"/>	<input type="checkbox"/> R
↳ Hereditary Motor-Sensory Neuropathies	<input type="checkbox"/>	<input type="checkbox"/> R
↳ Motor Neurone Disease	<input type="checkbox"/>	<input type="checkbox"/> R
Dermatomyositis / Polymyositis	<input type="checkbox"/>	<input type="checkbox"/> R
Endocrine Myopathies	<input type="checkbox"/>	<input type="checkbox"/> R
Familial Spastic Paraplegia	<input type="checkbox"/>	<input type="checkbox"/> R
RESPIRATORY SYSTEM DISORDERS ∨		
↳ Lung Neoplasms	<input type="checkbox"/>	<input type="checkbox"/> R
Sarcoidosis	<input type="checkbox"/>	<input type="checkbox"/> R
ENDOCRINE SYSTEM ∨		
Hypothyroidism	<input type="checkbox"/>	<input type="checkbox"/> R
ORTHOPEDIC DISORDERS ∨		
↳ Degenerative Spinal Disorders	<input type="checkbox"/>	<input type="checkbox"/> R
Intervertebral Disk Herniation	<input type="checkbox"/>	<input type="checkbox"/> R
HEMATOLOGY ∨		
↳ Megaloblastic Anemias	<input type="checkbox"/>	<input type="checkbox"/> R
IMMUNOLOGIC SYSTEM ∨		
Eosinophilia-Myalgia Syndrome	<input type="checkbox"/>	<input type="checkbox"/> R