"I used to be sure-footed!"

Jerzy Pawlak, MD, MSc, PhD

Willem, 39, is a right-handed painter, working in a motor vehicle repair shop. He developed a sudden onset of diplopia when gazing rightward. He subsequently developed numbness, paresthesia and left arm and leg weakness. His wife notes that he is ataxic when walking.

Willem's medical history

- He has a history of familial hypercholesterolemia and a family history of mild, diet-controlled diabetes
- Nine years ago, he developed facial weakness and tingling in his left arm. At that time, he had a computerized tomography (CT) brain scan, which was normal
- Five years ago, he injured his left ear

Willem's neurologic examination

- Right sixth nerve palsy and a left hemiparesis with defect in partial maintenance of the left limbs
- Mild ataxic gait, mild left hemiparesis and mild left limbs dyspraxia

Clinical investigations

- CT scan of brain- n'used:
  Mild dol chectatic change of the right basil artery
- MRI of the brain (Figures 1 and 2) shows:
  - Multiple extensive areas of increased signal intensity are seen throughout the white matter of the cerebral hemispheres bilaterally, and are predominantly periventricular in distribution
  - Similar lesions are noted throughout the corpus callosum and bilaterally in the internal capsules, the thalami and the brain stem and cerebellar hemispheres
  - Additional lesions are seen throughout the cervical and thoracic cord
  - The findings are consistent with multiple areas of demyelination
  - It should be noted that demyelination appears quite extensive in degree

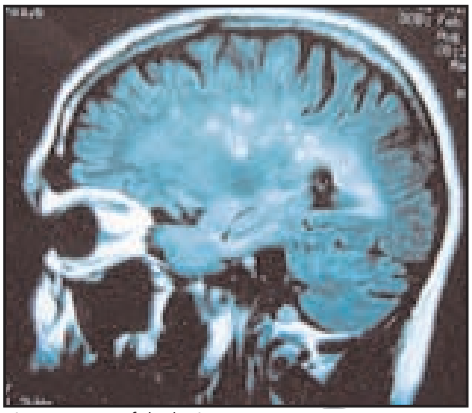

Figure 1. MRI of the brain.

What's your diagnosis?

a) Encephalomyelitis
b) Sarcoidosis
c) Multiple sclerosis
d) Brain stem stroke with a right sixth nerve palsy and a left hemiparesis.

Turn to page 38 for the answer ⟶

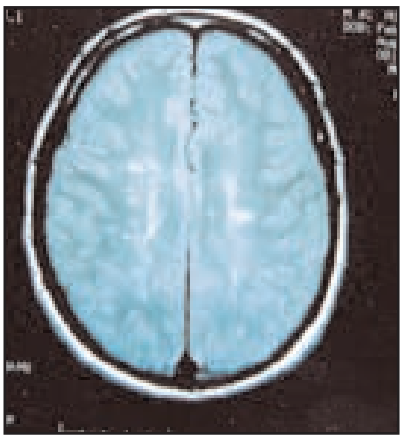

Figure 2. MRI of the brain.

Table 1

Early symptoms of multiple sclerosis

- Numbness and/or paresthesia
- Monophasia or paraphrasia
- Double vision, optic neuritis
- Ataxia
- Bladder control problems

Table 2

Subsequent symptoms of multiple sclerosis

- More prominent upper motor neuron signs
- Increased spasticity
- Paraparesis or quadriparesis
- Vertigo, inco-ordination and other cerebellar problems
- Depression and emotional lability
- Abnormalities in gait
- Dysarthria
- Fatigue
- Pain

Answer:
Multiple Sclerosis—Relapsing/Remitting

About multiple sclerosis

Multiple sclerosis (MS) is a chronic disease of the central nervous system that predominantly affects young adults during their most productive years. Genetic and environmental factors are known to contribute to MS, but a specific cause for this disease has not been identified.

Pathologically, MS is characterized by the presence of demyelinated areas and T-cell predominant perivascular inflammation in the brain's white matter. Some axons may be spared from these pathologic processes.

MS begins most commonly with acute or subacute onset of neurologic abnormalities. Initial and subsequent symptoms may dramatically vary in their expression and severity during the course of the disease. Tables 1 and 2 list some early symptoms and subsequent symptoms.

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Neurologic findings, clinical observation, MRI results (presence of areas of demyelination in the central nervous system), spinal fluid examination (presence of oligoclonal bands and/or elevated immunoglobulin G index) and, sometimes, tests of evoked potentials constitute the basis of diagnosis.

MS is classified into several categories according to its clinical course:

a) Benign
b) Relapsing/remitting (the most common variant)
c) Progressive/relapsing
d) Primary progressive
e) Secondary progressive

There is no curative treatment available for MS. However, a number of medications can be used to treat the disease symptomatically. Corticosteroids are the medications of choice for treating exacerbations. Interferon beta -1B and interferon beta-1a are successfully used to reduce the frequency and severity of relapses. Specific medications are also available to treat fatigue, pain, spasticity, bladder control problems, *etc.* Dx