

## Neurology Scenarios

### Scenario 1 of 6:

**Reason for Visit:** Abnormal gait, cognitive impairment, urinary incontinence.

**HPI:** A 78-year-old woman is evaluated for a 4-year history of a gradually worsening gait. Family also reports 18 months of memory problems and urinary incontinence. No fecal incontinence.

**Past Medical History:** Noncontributory.

**Review of Systems:** As above. No focal weakness, no recent history of falls.

**Physical Exam:** Afebrile, BP= 120/82, P= 74, R= 14. Patient exhibits an unsteady shuffling gait with small steps, but normal arm movements and posture. Muscular exam is normal. Patient is alert, speech is appropriate, but she is unable to recall three objects or complete serial calculations on the mini-mental status exam.

Results of all labs, including vitamin B<sub>12</sub> and thyroid function tests are WNL. An MRI of the brain shows ventriculomegaly, but no lesions, edema, or mass.

**Assessment and Plan:** Normal pressure hydrocephalus. Spinal tap to be performed, possible neurosurgical consult.

**Scenario 2 of 6:**

**Reason for Visit:** Recurrent migraine headaches.

**HPI:** A 34-year-old woman is evaluated in the office for migraine headaches, both with and without aura, since she was 13 years old. She averages three to four attacks each month and headaches are worse with menstruation. Headaches occurring with menstruation are only partially relieved with sumatriptan.

**Past Medical History:** Sumatriptan, orally as directed.

**Review of Systems:** As above.

**Physical Exam:** Unremarkable. No focal neurological deficits. Optic exam is WNL.

**Assessment and Plan:** Menstrual migraine, intractable. Change medication regimen prior to onset of menstrual cycle.

**Scenario 3 of 6:**  
**Emergency Department Services**

**HPI:** A 49-year-old man is evaluated in the emergency department after a witnessed collapse at home with generalized tonic-clonic seizure activity. His brother states this activity lasted 1-2 minutes before stopping spontaneously. Event included urinary incontinence. The patient has no previous history of seizures.

**Past Medical History:** Hypertension, on meds. Smokes 1 PPD for 30 years. No history of head trauma, no alcohol or drug abuse and no family history of a seizure disorder.

**Review of Systems:** As above.

**Physical Exam:** He is lethargic, but cooperative. Afebrile, BP= 145/85 and P= 80. He has mild weakness of the right face and arm that resolves over the next 4 hours.

Laboratory studies show plasma glucose and sodium levels are normal, as are all other laboratory studies. An MRI of the brain shows chronic small-vessel ischemic disease without acute changes, no space occupying lesions or edema.

**ED Course:** 2 mg intravenous versed given in the emergency department.

**Clinical Impression:** Generalized tonic-clonic seizure.

**Disposition:** Admit to inpatient and begin IV seizure meds.

**Scenario 4 of 6:**  
**Emergency Department Services**

**HPI:** Obese 80-year old woman with history of hypertension is evaluated in the emergency room after acute onset of garbled speech and left-sided weakness. The family members report that the symptoms appeared rapidly after patient grabbed her head complaining of headache and started vomiting. Event happened approximately 45 minutes ago.

**Past Medical History:** Hypertension, on meds.

**Review of Systems:** No previous headaches, palpitations, neurological symptoms, or vision changes.

**Physical Exam:** During the examination, the patient continues to vomit and becomes more difficult to arouse. Afebrile, BP= 200/100, P= 115, and RR= 22. Cardiovascular exam is normal, there is no arrhythmia, murmur, or bruit. Lungs are clear. Neuro exam is significant for left hemiplegia and patient is currently nonverbal except for guttural sounds.

**ED Course:** CT scan of the brain reveals large right parietal lobe hemorrhage.

**Clinical Impression:** Intracerebral hemorrhage.

**Disposition:** Admit to ICU - monitor intracranial pressure, glucose, and respiratory status.

**Scenario 5 of 6:**

**Reason for Visit:** Tremor.

**HPI:** A 55-year-old man is evaluated in the office for a 5-month history of tremor. The tremor affects both arms and is present "most of the time." It is beginning to affect his ability to perform daily tasks.

**Past Medical History:** Significant for type 2 diabetes mellitus with gastroparesis. Medications include insulin and metoclopramide.

**Review of Systems:** As above.

**Physical Exam:** Speech, language, and mental status are all WNL. Cranial nerves are intact. There is minimal facial expression, slow movements with a mildly stooped posture and bilateral upper and lower extremity rigidity. DTL's and muscle strength are also WNL, but there is distal sensory loss in the lower extremities. Bilateral pedal pulses are diminished.

**Assessment and Plan:** Drug-induced parkinsonism - stop metoclopramide.

**Scenario 6 of 6:**

**Reason for Visit:** Right arm tremor.

**HPI:** A 52-year-old woman presents with complaints of a right-arm tremor for 7-months. The tremor only occurs at rest. She also complains of having difficulty buttoning her clothes and tying her shoes. She denies history of head trauma and there have been no recent falls.

**Past Medical History:** Unremarkable. No significant family history.

**Review of Systems:** As above.

**Physical Exam:** Cardiovascular and pulmonary exams are normal. Neurological exam shows minimal facial expression. Cranial nerves are intact. Normal strength on motor exam, but mild rigidity in the left arm is present. There is a 4-hertz resting tremor in the right hand at rest. DTL's and sensory exam are within normal limits. There is no ataxia but gait has a slight shuffle and there is diminished arm swing bilaterally.

**Assessment and Plan:** Parkinson's Disease. Patient sent home with trial of meds.