Case 10: SHAKING SPELLS, BLACKOUTS AND FACIAL NUMBNESS
(Slide CC10-1)

Chief Complaint: The patient is a 24 year old woman who was admitted to the hospital for cardiac monitoring following two recent episodes of syncope ("blacking out").

History of Present Illness/Past Medical History: Approximately eight years ago, the patient had an episode of **generalized shaking and loss of consciousness**. She does not remember anything else except that she was in the hospital for a few days. Her mother states that she had simply "fainted" because she was "nervous." Two years ago, the patient had another blackout, this time without any tonic-clonic movements, and she was evaluated in the emergency room and sent home the same day. Again, no further details are available. Three days ago the patient had another episode of loss of consciousness witnessed by her husband, with no tonic-clonic movements and was brought to the emergency room. She was sent home, and an outpatient workup was planned including cardiac monitoring and an EEG. Her mother, again, felt that her symptoms were due to "nervousness" because of a recent explosive fight that the patient had with the mother's boyfriend.

The patient's past history is also notable for occasional episodes of heart palpitations, especially associated with use of inhaled beta-agonists that she takes for asthma. Also, she has noticed that for approximately two years her **left jaw** has been **numb**, and that she has had "constant" bitemporal **headaches**. She denies nausea, vomiting, vision changes or other symptoms. She has no history of dental surgery.

On the evening of admission the patient was at home and suddenly felt that she was shaking all over without initial loss of consciousness. She recalls walking into her bedroom, turning on her light and getting into bed. She then lost consciousness and was unresponsive to her 5 year old daughter who was trying to arouse her. The daughter called the patient's sister who then called an ambulance and the patient was brought to the emergency room. She awoke slowly over about 30 minutes and described feeling some chest tightness which resolved spontaneously. Because of her chest symptoms, syncope and history of palpitations she was admitted to the medicine service for cardiac monitoring and further evaluation. She denies any history of drug or alcohol use.

Physical Examination: Thin, well developed young woman in NAD.
T= 98.0 P= 84 R= 12 BP= 100/70. P and BP did not change from supine to upright.
HEENT-no evidence of head trauma. Neck - supple; Lungs - clear;

Cardiac - RR no m/g/r; Abd. - benign; Ext. - no edema.

Neuro: Mental Status - A&Ox3. Normal speech, calculation, and memory. Denies symptoms of depression. Mildly anxious.

Cranial Nerves - PERRL. EOMI, but **diplopia noted by patient on L end gaze.** No nystagmus. Visual fields full. Fundi- no papilledema. Face andpalate elevation symmetric. Tongue midline. CN IX normal.

Absent sensation to light touch, pinprick and temperature (vibration not tested) **was noted in the shaded area shown.**

Motor - Normal bulk/tone. 5/5 strength throughout.

Reflexes - normal, 2+ symmetrical; Coordination - normal F-N-F, heel-shin.

Gait - Normal, except **unable to walk steadily on heels and unable to tandem (heel-toe) walk.**

Sensation - normal, except for deficit in face noted above.

Questions:

1. What are the most common neurological causes of syncope and which could cause syncope in this patient?

2. A. Localize the neuroanatomic structures that could be involved to produce each symptom or sign shown in **boldface** above.

   B. Next, attempt to synthesize these into a single unifying diagnosis.