

BRAIN STEM CASE HISTORIES

CASE HISTORY VII

A 60 year old man with hypertension wakes one morning with trouble walking. He is feeling dizzy and is sick to his stomach. His wife gets him into the car and brings him to the emergency room where you are asked to evaluate him. On the way to the emergency room his wife noted that his face seemed to be drooping on the right.

On examination you find that the man is quite uncomfortable and prefers to be lying still rather than trying to cooperate with the exam. His mental status is appropriate. His pupillary exam is normal but he cannot look to the right with either the left or the right eye. The corneal reflex is abnormal on the right. Although he feels the cornea being touched he does not close his right eye. His left eye does close to right corneal stimulation. The right side of his face is weak and he has marked loss of right sided hearing. His gag reflex is intact. He is unable to walk and has right upper extremity intention tremor. When you sit him up he falls to the right. His reflexes and strength are intact in all limbs.

QUESTIONS CASE HISTORY VII

1). Where is the lesion, and what structures are responsible for his symptoms and signs?

2). What is the etiology of the lesion?

3). How can the lesion be confirmed?

4). What treatment should be considered? What treatments may be developed to treat stroke?

CASE HISTORY VIII

A 55-year-old woman noticed that she suddenly became nauseated and experienced vertigo. Her voice was hoarse and she was having difficulty swallowing. She also noticed a burning pain in and around the **LEFT** eye. Three days later the pain had subsided but she decided to see a neurologist. On her way to the hospital she started hiccuping and her husband noticed that her pupils were not symmetrical.

Upon examination it was found that both muscle tone and reflexes were normal and equal in all four extremities. The nausea and vertigo had subsided and no nystagmus was present. Taste was normal on both sides of the tongue. There was **NO** detectable paralysis of the jaws, facial muscles, or tongue, but an inspection of the pharynx showed that the uvula was directed toward the **RIGHT**. Laryngoscope investigation also suggested paralysis of the **LEFT** vocal cord. There was loss of pain and temperature sensations on the **LEFT** side of the face and **RIGHT** side of the entire trunk including the arm and leg. The exam revealed that her **LEFT** pupil was smaller than the right and the **LEFT** side of her face was dryer and warmer than the right side. The patient tended to fall to the left on standing and had a left upper extremity intention tremor. The patient was no longer hiccuping.

QUESTIONS CASE HISTORY VIII

1). Where is the lesion, and what structures are responsible for his symptoms and signs?

2). What is the etiology of the lesion?

CASE HISTORY IX

A young girl, aged 14, was admitted to the hospital for diagnosis. According to the history, her birth had been normal and uncomplicated. There had been no unusual illness or accidents during her childhood, and her growth and development were normal. About a year before this admission, the girl began to complain of “ringing or buzzing” in her **RIGHT** ear, a condition which had persisted since. As time went on the girl began to experience vertigo (sensation of turning) and nausea. When walking she tended to veer to the **RIGHT**.

Examination revealed that there was almost 100 percent loss of hearing in the **RIGHT** ear. Sometimes there was a spontaneous slow conjugate movement of the eyes to the **RIGHT**, and a fast return movement to the **LEFT**. When there was no spontaneous nystagmus, caloric stimulation of the **RIGHT** ear with either cold or hot water had **NO** effect. However, stimulation of the **LEFT** ear with **COLD** water resulted in **RIGHT** nystagmus while stimulation with **WARM** water elicited **LEFT** nystagmus. All muscles on the **RIGHT** side of her face showed evidence of weakness. There was a loss of taste from the **RIGHT** side of the tongue and a “dry” (no tears) **RIGHT** eye. Some incoordination of the **RIGHT** arm and leg was also apparent.

QUESTIONS CASE HISTORY VIII

1). Where is the lesion, and what structures are responsible for his symptoms and signs?

2). What is the etiology of the lesion?

CASE HISTORY X

Upon examining a 55 year old male, the neurologist found weakness of the **RIGHT** arm and leg; a Babinski sign was present (plantar reflex was extensor). Examination of the tongue in the mouth revealed no atrophy or wrinkling, but upon protrusion the tongue deviated to the **RIGHT**. There was marked weakness of muscles in the lower half of the face on the **RIGHT**, but no atrophy of these muscles. There was a ptosis of the **LEFT** eyelid. When the neurologist lifted the eyelid, the pupil was dilated and the eye was turned down and out.

HINT! THERE IS **ONE** LESION SITE.

QUESTIONS CASE HISTORY VIII

1). Where is the lesion, and what structures are responsible for his symptoms and signs?

2). What is the etiology of the lesion?

CASE HISTORY XI

A 56 year old woman has a long history of numbness in and clumsiness of her hands. Initially the numbness started in her right hand but progressed slowly to include both hands and both arms. Over the past year the numbness has actually included the shoulders, neck, scalp and most recently has included the area of the face next to the hairline and the angle of the jaw. Besides the numbness, she has noted increasing difficulty in opening jars and over the past 2-3 years has had trouble brushing her hair. Most recently she has begun to have trouble with slurred speech, swallowing, and a hoarse voice.

Her other complaints include trouble with walking. It seems that she is having trouble with tripping over her toes. She also states that she urinates 10-15 times per day and that she needs to get to the rest room quickly otherwise she can loose her urine.

She has smoked cigarettes for many years and recently stopped because she has burned her fingers a number of times. She had to have a skin graft of her right hand because of a severe burn she sustained from a stove.

Her exam revealed a normal mental status. Cranial nerve exam showed a decrease in pin prick sensation at the hair line and angle of the jaw with some extension into the V nerve distribution. The palate moved poorly and her voice had a nasal characteristic. Her gag reflex was depressed. There has some atrophy of the left side of her tongue with fasciculations noted. Motor exam revealed diffuse weakness and atrophy of the upper extremities. There were some fasciculations noted in the biceps bilaterally. The reflexes in the upper extremity were barely obtained. In the lower extremity there was mild weakness and increased tone and reflexes. Bilateral Babinski signs were noted. The patient's gait was stiff and she could not walk on her heels. Sensory exam in the lower extremities was normal. The sensation in the upper extremities was intact to vibration and joint position sense but she could not feel pin prick in either upper extremity or across the shoulders, the neck or the scalp.

QUESTIONS CASE HISTORY XI

1. Where is the lesion and how can you explain the patient's complaints and the findings on exam?

2. What are the possible etiologies?

3. How would you evaluate this patient?

