Case History XII

A 80 year old ex-president of the United States was out riding his horse when the horse stumbled and the ex-president fell off the horse hitting his head on the ground. He did not lose consciousness but did feel slightly dazed. He was taken back to the house and appeared to be normal. Over the next several days, he complained of a headache and he seemed to have trouble with his ability to concentrate. His doctor obtain a series of skull X-rays and no abnormalities were found.

Over the next two weeks the headaches continued and periods of confusion were noted by his wife. The ex-president began to note that he was dropping his knife when he was holding it in his left hand to cut his meat.

His doctor obtained a neurologic consult. On examination, the ex-president seemed to be inattentive and could not repeat 5 digits in reverse. He also could not remember who the president was before Carter. He thought it was Nixon. The other pertinent findings included a decrease in rapid alternating movements of the left hand, a left pronator drift, and slightly increased reflexes on the left with a left Babinski sign.

A CT scan of the head was obtained.

QUESTIONS CASE HISTORY XII

1). What system is involved to give weakness?

2). Dysfunction of what systems can give rise to inattention and forgetfulness?

3). Why did the president complain of headache?

4). What is the subdural space? What blood vessels (arteries or veins?) are the usual source of bleeding into the subdural space?

5). Why are older people more susceptible to developing subdural hematomas?

Case History XIII

A 25 year old motorcyclist was hit by a car and flew off her Harley. She was not wearing a helmet and landed on her head. She briefly lost consciousness. She came to quickly, remembered what had happened, and could answer questions correctly when the police came. She actually drove her motorcycle home and counted her blessings. She told her boyfriend what had happened and also started to complain of a headache. She began to have weakness of the right side and her boyfriend noticed that her left pupil was greater in diameter than her right pupil. She became increasingly less responsive and he called 911.

In urgent care, her vital signs reveal a pulse rate of 60 with a blood pressure of 190/100. You examine her and find that she does not respond to verbal stimulation and that she moves the left side of the body more than the right side when painful stimulation is given. Her left pupil is 6 mm in diameter and barely responsive to light with minimal consensual response (when light was shined in the right eye). The right pupil is 3 mm in diameter and responds briskly to direct and consensual light. Because her neck has been braced by the paramedics and she had a recent accident, you check her eye movements using cold water calorics. Her eyes deviate to the right with right ear irrigation but the left eye does not fully adduct. With left ear cold water irrigation, the eyes deviate briskly to the left. The other main finding on exam is a right Babinski sign.

An emergency CT scan is obtained and she is prepared to have surgery. On the way to the OR you check her Babinski signs again and now both toes go up.

QUESTIONS CASE HISTORY XIII

1). What did the CT scan show and which side of the head did the surgeons prep?

2). Explain her examination findings in urgent care. Why was her pulse slow and blood pressure high? Explain her caloric responses.

3). Why did her left foot develop an extensor plantar response?

Case History XIV

J.M. was a 21 year old, right handed male with a tenth grade education, who was wounded 9 months prior to his examination by a mortar shell fragment that penetrated the left frontoparietal region and left him with severe right hemiplegia and severe aphasia. At the time of examination, he was moderately depressed but entirely cooperative. During his stay in the hospital, he displayed considerable artistic talent, but his poor morale prevented his following through with plans for formal art training. On a follow-up visit after 6 months at home, his speech showed essentially the same pattern described here, but with easier access to vocabulary. His spirits were greatly improved; he had become engaged to be married and had made plans to enter art school.

During the initial diagnostic interview, his speech was limited to one-word answers, almost all nouns. A sample of his verbal production follows (E = examiner, J.M. = patient's initials):

E: What did you do before you went to Vietnam?
J.M.: Forces.

E: You were in the army?
J.M.: Special forces (poor articulation).

E: What did you do?
J.M.: Boom!

E: I don't understand.
J.M.: 'Splosions.
(with further examiner questioning, the patient appears frustrated by his inability to make himself understood)
J.M.: Me...one guy.

E: Were you alone when you were injured?
J.M.: Recon...scout.

E: What happened; why are you here?
J.M.: Speech.

E.: What happened?
J.M.: Mortar.

E.: Repeat after me: "No ifs, ands, or buts."
J.M. (with hesitation- .....ifs....buts...oh no...[expletive]...)

QUESTIONS CASE HISTORY XIV

1) Is comprehension intact? Justify your answer. (Clue: is the content of the response related to the question?)

2) Is the speech grammatically appropriate, in the sense that the patient uses complete sentences that have normal grammatical structure? Is the speech fluent?

3) What is your assessment of the patient's ability to repeat a phrase?

4) What is the significance of his frustration during the interview? Is the patient aware of the deficit?

5) Identify the site of the lesion in the left hemisphere. Why does he have a hemiparesis?

Case History XV

A.M., a 56 year old physician, suffered the sudden onset of confusion and a speech disturbance. A.M. was not able to work after the event. The episode occurred 8 months prior to his examination. At the time of examination, his initial right hemiparesis had cleared. He had a right homonymous hemianopia. Sensation was normal.

A sample of his verbal production follows (E = examiner, A.M. = patient's initials):

E: Is it day or night?
A.M.: Right, but not here.

E: Could you close your eyes?
A.M.: If you want to, go head. (He does not close his eyes).

E.: Repeat after me: "No ifs, ands, or buts."
A.M.: Why sure (laughs). No smoke in the place or if either.

The following transcript is of the patient providing a narrative to a presented drawing of two children taking cookies from a kitchen jar while a woman is working in the kitchen. The following description was spoken rapidly, with little effort or frustration.

"Well this is...mother is away here working her work out o' here to get her better, but when she's looking, the two boys looking in the other part. One their small tile into her time here. She's working another time because she's getting, too. So the two boys work together an one is sneakin' around here, making his...work an' his further funnas his time he had. He an' the other fellow were running around the work here, while mother another time she was doing that without everything wrong here. It isn't right, because she's making a time here of work time here, letting mother getting all wet here about something. The kids aren't right here because they don't just say one here and one here-that's all right, although the fellow here is breakin' between the two of them, they're comin' round too."

(from Goodglass & Kaplan, 1983, pg. 81-82).

QUESTIONS CASE HISTORY XV

1) Is comprehension intact? Justify your answer. (Clue: is the content of the response related to the question?)

2) Is the speech fluent, i.e., is there ability to produce words in connected sequences reflecting, in part, ease of articulation?

3) What is your assessment of the patient's ability to repeat a phrase?

4) Is the patient aware of the deficit? What is the significance of his affect during the interview?

5) Identify the site of the lesion in the left hemisphere. What is the significance of the lack of hemiparesis at the time of the interview?

Case History XVI

A 34-year-old woman comes to see you because of problems with her balance and walking. She has noticed this for the past few days and her symptoms do not appear to be getting better. In addition, she feels numbness and tingling in her hands and feet. Sometimes when she bends her head forward she may feel an electrical shock going down the spine. When she is out in the summer heat, her symptoms seem to get worse and she may develop double vision. About 12 years ago she lost vision in her right eye. This recovered with treatment. She had some double vision in the past but not recently except when she was out in the heat. There is no family history of neurological problems.

On exam you find her mental status is normal. Cranial nerves exam was remarkable for a right afferent papillary defect (light in the left eye caused constriction but moving the light to the right eye resulted in both pupils to dilate) and visual acuity in the right eye was 20/30 even with correction. When looking to the left there was nystagmus in the left eye and the patient complained of double vision with looking to the left, but not to the right. A right eye adductor weakness was present on lateral gaze but not convergence. The rest of the cranial nerves were normal. Motor exam showed good strength in the upper extremities proximally but mild right grip weakness. Reflexes in the upper extremity were normal. In the lower extremities there was mild weakness bilaterally with some focal weakness in right foot dorsiflexion. Tone seemed increased in the legs, reflexes were brisk, and a definite right Babinski sign was present. Sensory exam was normal to pin prick but there was a decrease in vibration and proprioception in the toes and fingers. Vibration sensation changes on the cervical vertebral bodies around C4-5. Cerebellar function was okay on finger-nose-finger testing, although rapid alternating movements in her right hand were clumsy. Heel to shin testing was performed slowly but accurately. Her gait was unsteady and wide-based. She could stand with her feet together but tended to fall with her eyes closed.

QUESTIONS CASE HISTORY XVI

1. Explain the deficits on neurological exam. Where and how many lesions can explain this woman's findings?

Lesion 1

Lesion 2

Lesion 3

Lesion 4

2. What could cause this clinical picture and what tests would you perform?

3. Why does she have more problems in the heat?

4. What treatment did she receive 12 years ago and what treatments should be considered?

Case History XVII

A 70-year-old man presents with diplopia and right eye and forehead pain. He first noted troubles about 6 months ago. At first his complaints were intermittent but now they are present nearly all the time. His past medical history is pertinent for hypertension and colon cancer, treated surgically 5 years ago. He was involved in a car accident about 2 years ago that was associated with loss of consciousness but not hospitalization. A CT scan in the ER was normal.

On exam: his mini-mental status was 27/30 (losing points for memory 1, county 1, figure 1). Cranial nerves: right pupil larger than the left by 2 mm and light reflex less brisk than the left pupil. Fundoscopic exam negative. Visual acuity and fields normal. Mild right ptosis was noted. Full extraocular movements were obtained but the patient complains of double vision when looking to the left either downward or upward with images vertically displaced, more horizontally displaced with direct left lateral gaze. Mild decrease sensation first division of V cranial nerve. Otherwise cranial nerves normal. Motor and sensory exam remarkable for a decrease in ankle jerks and vibration bilaterally. Gait normal for age.

QUESTIONS CASE HISTORY XVII

1. Where is the lesion?

What could cause the lesion?