

Format for lecture will be active participation by medical students. Reading material should be accomplished prior to this lecture as you will be required to participate in the below 10 questions. Taped lecture is available on video prior to lecture only.

CEREBROVASCULAR DISEASE CASES

1. A 50 year old normotensive ectomorphic man who has no cardiovascular or cerebrovascular symptoms goes for his routine physical examination. On physical examination, he is found to have a left carotid bruit. He has no neurological symptoms and his examination is entirely normal. What does the bruit mean and what do you advise the patient to do? Support your answer by data derived from the literature.

2. A 55 year old normotensive man has an episode of sudden loss of vision in his right eye. This persists for 15 minutes and then rapidly resolves. He has a completely normal neurological and ophthalmological examination. What has happened to this patient and what is the appropriate management?

3. A 60 year old man has a 15 minute episode in which he cannot express himself. He becomes increasingly frustrated with this and suddenly stops talking. He remains unable to express himself and unwilling to talk for a period of 18 hours. One day later he comes to the emergency room for evaluation and at this time he is entirely neurologically normal and his speech is normal. What has happened to this man and what subsequent evaluation should be carried out?

4. A 65 year old hypertensive man suddenly develops weakness in his left arm and left leg. This is not accompanied by any language, speech, memory, sensory or visual disturbances. On neurological examination, the patient's only findings are weakness involving the left side of his face and a left hemiplegia. What is the localization of a lesion which would cause this pattern? What diagnostic studies should be done and what treatment should be offered?

5. A 50 year old hypertensive man develops headache following an argument with his wife. He becomes confused and vomits. The patient has slight left-sided weakness. When he is brought to the emergency room, his blood pressure is 300/200. His neck is supple and he has no focal neurological deficit. What is the diagnosis and what is the appropriate management of this patient?

6. A 40 year old man awakens one morning with a severe headache. He then vomits. The patient then develops difficulty with speech; he cannot express himself. On neurological examination, he has an expressive non-fluent speech pattern with right hemiparesis and accompanying right hemisensory deficit. What are the diagnostic possibilities and based on the neuroimaging findings, what should next be done?

7. A 65 year old man with a history of chronic atrial fibrillation due to rheumatic mitral valve disease awakens one morning and appears confused. On neurological examination, he cannot follow commands. The remainder of the neurological examination is normal. What is the most likely diagnosis and which diagnostic studies should be performed and what treatment should be offered?

8. A 45 year old man is watching television and suddenly develops a severe headache which reaches maximal intensity within seconds. He becomes confused and vomits. The headache remains severe in intensity; however, the headache decreases after several hours and then disappears. The patient does not go to the emergency room. Two weeks later his wife annoys him enough so that he schedules an appointment with his general practitioner. The general practitioner says that his neurological examination is normal and orders a CT scan and a MRI scan; both of which are normal. The patient is told that he most likely had a vascular headache he patient's wife is not happy with his diagnosis and insists the patient be referred to a neurologist. What is the most likely diagnosis and what would be the most appropriate management?

9. A 20 year old woman goes to a funeral and during the ceremony becomes warm, develops weakness in her legs and light-headed sensation. Her vision then blurs-out and then she falls and becomes unconscious. When she awakens, she is embarrassed by what has happened but has no confusion. She is taken to the emergency room where she was hospitalized with diagnosis of posterior circulation transient ischemic attack. Discuss whether you agree with this diagnosis and whether angiography would be warranted.

10. A 50 year old hypertensive man with a prior history of angina is admitted to the hospital because the angina has become refractive to medical treatment. The patient undergoes coronary angiography and at the time of coronary angiography, he is found to have 50% stenosis of the right carotid artery with evidence of an ulcerated plaque. The patient has no neurological symptoms; however, a CT scan shows evidence of a small right cortical cerebral infarct and a MRI scan confirms this diagnosis and shows 3 additional lacunar infarcts in both subcortical regions. His physician suggests that the patient undergo right-sided carotid endarterectomy. Discuss risk versus benefit ratio of this procedure.