

Clinical Quiz on Hypertensive Crisis

Type of Article: Medical Education

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Case History:

A 40-year-old man with a 3 months history of progressive headache presented with nausea, vomiting, visual disturbances and an episode of epileptic seizure with loss of consciousness. From his medical history, the patient had been diagnosed as hypertensive and received treatment with beta-blockers in the past, but he discontinued it, 1 year ago. At the time of admission, his blood pressure was elevated to 180/130 mmHg and remained high in several measurements during the first 24 h, despite the prompt start of antihypertensive treatment. MRI of the brain was performed on the admission day demonstrating multiple scattered areas of increased signal intensity on T2-weighted and FLAIR images in both occipital and posterior parietal lobes. There were also similar lesions in both hemispheres of the cerebellum (especially the cerebellar white matter on the left) as well as in the medulla oblongata (Figure 1ac). The lesions were not associated with mass effect and after contrast administration there was no evidence of abnormal enhancement.

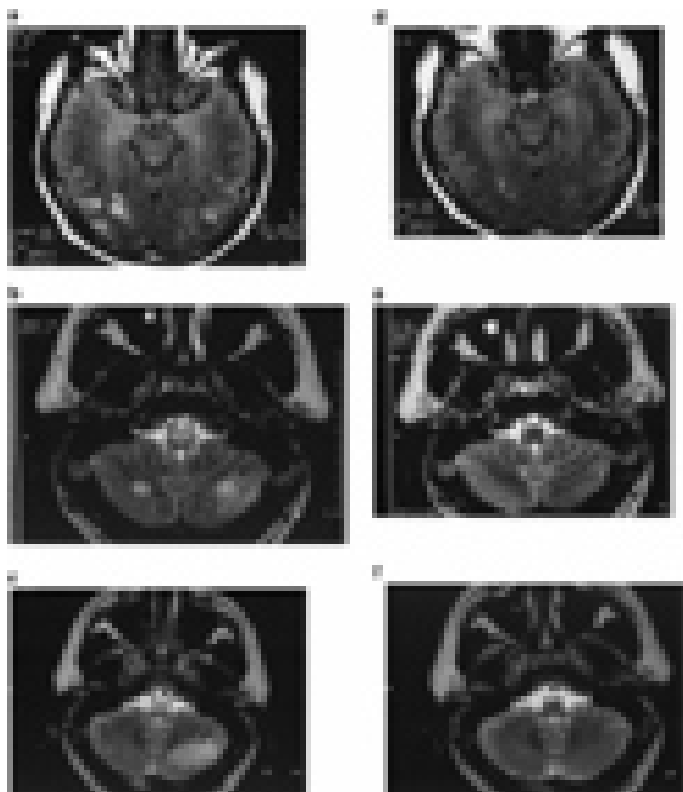


Figure 1. Brain MRI of patient

MULTIPLE CHOICE QUESTIONS

Choose the most appropriate answer of the options A to E.

- 1) What is the diagnosis?
 - a) Severe migraine
 - b) Hypertensive encephalopathy
 - c) Hypertensive urgency
 - d) Cerebrospinal meningitis
 - e) Subarachnoid hemorrhage

- 2) The following is true of the pathophysiology of the above condition:
 - a) Inflammation of the cerebral meninges
 - b) Cerebral edema caused by raised intracranial pressure from a massive intracerebral bleed
 - c) leakage of fluid under high pressure into the perivascular tissue, resulting in cerebral edema
 - d) b and c above
 - e) none of the above

- 3) Diagnosis of the above condition
 - a) Is mainly clinical
 - b) Is made following the result of CSF analysis
 - c) Only made with a CT-scan
 - d) Only made with an MRI
 - e) None of the above

- 4) The following drugs are useful in the acute management of the above patient except:
 - a) Mannitol
 - b) Hydralazine
 - c) Labetalol
 - d) Amlodipine
 - e) None of the above

- 5) The following is true of the acute management of the above patient except:
 - a) Cautious lowering of blood pressure is appropriate
 - b) Rapid lowering of blood pressure is necessary
 - c) Control of blood pressure is not necessary.
 - d) High dose antibiotics more important.
 - e) None of the above

- 6) Other drugs useful in the management of the above patient include the following except
- a) Nitroprusside
 - b) Nitroglycerin
 - c) Nicardipine
 - d) Timolol
 - e) Esmolol
- 7) Concerning Prognosis
- a) More than 80% survive up to 2 years
 - b) More than 90% survive one year
 - c) Very poor
 - d) a and b above
 - e) None of the above
- 8) Other conditions requiring rapid lowering of blood pressure include the following except
- a) Aortic dissection
 - b) Severe pre eclampsia
 - c) Acute left ventricular failure
 - d) All of the above
- e) None of the above
- 9) Hypertensive crisis:
- a) Less than 1 percent of patients with primary hypertension progress to an accelerated-malignant phase.
 - b) The incidence has receded because of more widespread treatment of hypertension.
 - c) Any hypertensive disease can manifest as a crisis.
 - d) All of the above are correct
 - e) Only b and c are correct
- 10) Concerning Hypertensive crisis
- a) some patients may be relatively asymptomatic
 - b) Young black men are particularly prone
 - c) fewer than 25 percent of patients with malignant hypertension survive
 - d) all of the above
 - e) a and b above

1) B, 2) C 3) A 4) D 5) B 6) D 7) D 8) D 9) D 10) E

ANSWERS TO CLINICAL QUIZ