

### QUESTION

1. A 65-year-old male patient with a long history of hypertension and hyperlipidemia is brought to the emergency department by ambulance. He is found unresponsive at home. On arrival, he is in deep coma with a Glasgow Coma Scale score of 3. His vital signs are: temperature 36.5°C, heart rate 110 bpm, blood pressure 180/100 mmHg, and respiratory rate 18 breaths per minute. He has a regular sinus rhythm. There is no neck stiffness, and his pupils are equal and reactive. His lungs are clear, and there are no focal neurological deficits. A head CT scan shows a large right parietal subdural hematoma with a midline shift to the left. The patient's medical history includes a recent fall from a ladder while working in his garden.

### ANSWER

The patient has a large right parietal subdural hematoma causing a significant midline shift. This is a surgical emergency. The patient's vital signs, particularly the elevated blood pressure and tachycardia, suggest a Cushing's triad response to increased intracranial pressure. Immediate neurosurgical consultation is required for craniotomy and evacuation of the hematoma. Supportive care, including airway management and fluid/electrolyte balance, should be initiated while awaiting surgery.

2. A 45-year-old female patient is brought to the emergency department with a 2-hour history of severe, tearing pain in her right eye. She has a history of glaucoma and is on chronic therapy with timolol and latanoprost. Her vision is severely blurred, and she has a red, swollen eye. Her vital signs are stable. On examination, there is a fixed, dilated pupil and a shallow anterior chamber. The intraocular pressure is 45 mmHg. There is no afferent pupillary defect.

### ANSWER

The patient has acute angle-closure glaucoma. This is a medical emergency. Immediate treatment is required to lower the intraocular pressure. Initial management includes intravenous acetazolamide, oral acetazolamide, and topical beta-blockers (timolol) and alpha-agonists (brimonidine). If the pressure does not respond, intravenous mannitol or furosemide may be used. Urgent ophthalmology consultation is needed for definitive treatment, which may include laser peripheral iridotomy or iridectomy.

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3. A 30-year-old male patient is brought to the emergency department with a 4-hour history of severe, tearing pain in his right eye. He has a history of glaucoma and is on chronic therapy with timolol and latanoprost. His vision is severely blurred, and he has a red, swollen eye. His vital signs are stable. On examination, there is a fixed, dilated pupil and a shallow anterior chamber. The intraocular pressure is 45 mmHg. There is no afferent pupillary defect.

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### ANSWER

The patient has acute angle-closure glaucoma. This is a medical emergency. Immediate treatment is required to lower the intraocular pressure. Initial management includes intravenous acetazolamide, oral acetazolamide, and topical beta-blockers (timolol) and alpha-agonists (brimonidine). If the pressure does not respond, intravenous mannitol or furosemide may be used. Urgent ophthalmology consultation is needed for definitive treatment, which may include laser peripheral iridotomy or iridectomy.