

Perioperative Neurological Cases

Patient 1

A 72-year-old male presents to your office for preoperative risk assessment. He has an indwelling urinary catheter and is planned for transurethral resection of the prostate for benign prostatic hyperplasia. The surgery is scheduled for tomorrow. He had a cerebrovascular accident (CVA) at an outside hospital 10 days ago and has mild residual left hemiparesis. He does not recall which tests were performed at the outside hospital. His blood pressure is 152/78 and his heart rate is 84. His heart sounds are regular and there is no murmur. There is no carotid bruit. His neurologic exam shows 4/5 strength in the left upper and left lower extremities.

What is his risk for surgery? Should he proceed with surgery as planned?

What work up could establish the cause of his stroke and what secondary prevention measures should be considered?

Patient 2

A 76-year-old female presented to you for preoperative evaluation prior to total hip arthroplasty. While taking the history, you noticed that her daughter gave most of the answers to your questions. When you attempted to redirect questions to the patient, she looked toward her daughter to provide the answers. The patient lives with the daughter and is able to walk up and down the stairs in their home with no problems. The daughter does all of the shopping, the laundry, and the cooking. The patient has a history of hypertension, which has been treated with atenolol 50 mg every day. Her blood pressure was well controlled and her exam was normal, so your assessment was that she could proceed with surgery. On postoperative day #2, she has fever to 100.0° F and seems to be sleeping all the time. The nurse calls you because the patient will not participate with physical therapy.

What might be going on?

You come to see the patient. She does not remember seeing you in the office prior to surgery. In fact, she does not remember having surgery and wants to go home. She gets agitated and tries to get out of bed.

Does this history support your initial concerns? What medications might contribute? What tests should be ordered?

Patient 3

A 56-year-old male with history of hypertension and a family history of adult polycystic kidney disease is admitted with a subarachnoid hemorrhage (SAH). You are consulted for preoperative assessment and to help manage his hypertension. He is on hydrochlorothiazide 25 mg every day. He is confused and lethargic and unable to give a history. Blood pressure is 170/100 and his heart rate is 80. His exam is otherwise unremarkable. His ECG shows diffuse, deep T wave inversions and QT prolongation.

Does he need any testing to clarify his risk prior to surgery? What do you make of his ECG changes?

Should we lower his blood pressure? By how much? With what medication(s)?

Patient 4

A 74-year-old female with diabetes and hypertension is admitted with an ischemic CVA. You are consulted for management of her hypertension. She has right hemiparesis, aphasia and dysphagia. Her blood pressure is 200/110.

How much do you want to decrease her blood pressure? Over what period of time? What medications will you use?

Patient 5

A 64-year-old female with diabetes and hypertension is admitted with an ischemic CVA. She has dense left hemiparesis.

What type of deep venous thrombosis (DVT) prophylaxis should she receive?

Patient 6

A 56-year-old male with a history of cocaine addiction and hypertension was admitted with an intracranial hemorrhage 2 weeks ago. His blood pressure is now well controlled on clonidine 0.1 mg patch and hydrochlorothiazide 25 mg every day. You are consulted for hyponatremia. His serum sodium is 123 meq/L. Serum osmolality is 268 mosm/kg and urine osmolality is 280 mosm/kg. Urine sodium is 40 meq/L. Blood urea nitrogen (BUN) is 10 mg/dl and serum creatinine is 1.2 mg/dl. He is obese and it is difficult to assess his volume status.

What are the possible causes of his hyponatremia?

His hydrochlorothiazide is stopped and his sodium does not improve. His uric acid level is 2.0 mg/dl, and his weight is up 10 lbs since admission. Despite free water restriction, a full pitcher of water is found at his bedside 3 days in a row.

What would you manage his hyponatremia at this point?

What is the treatment of SIADH? What is the treatment of CSW?