**Academic Half Day – Neurologic Emergencies**

**LEARNER GUIDE**

**CASE 1**

**You are the NMT B senior resident overnight and receive a call from a nurse who tells you she has a patient who is a 71 yo M admitted earlier today for an elective afib ablation scheduled for tomorrow morning. She remembers bringing him a dinner menu a couple hours ago. She just came in to give him his evening medications at 8 pm and he is not responding.**

**You ask the nurse to obtain a full set of vital signs and immediately go to evaluate the patient. You note the following when you see him:**

**VS: T 98.2, HR 111, BP 190/115, SpO2 96% on room air**

**He is lethargic but arousable. He is not speaking but seems to be able to understand you. He has a L gaze preference and R facial droop. Motor testing reveals 0/5 strength in R arm and 3/5 in R leg. Decreased sensation on R side. No neglect or extinction.**

1. **After vitals, what is the first piece of objective data you should obtain in any patient with a change in neurologic status?**
2. **What are you worried about based on the above scenario and what are your initial steps in management?**
3. **What is the first history related information that you should obtain?**
4. **Next, activate a code stroke! How do you call a code stroke at UCMC and the VA? Who is notified?**
5. **While waiting for the neurology team to arrive, what head imaging do you order and what are key pieces of information you should obtain from the patient’s chart? (after you answer this question, turn to the last page of packet for some tips!)**
6. **What are the blood pressure goals in acute stroke and agents you should use?**
7. **What are some contraindications to tPA you should be aware of and ready to report to the neurology team when they arrive?**

**CASE 2**

**You’re enjoying a delightful string cheese from the silver fridge when a rapid response page goes off. You enter the room and note a patient who is tachycardic, tachypneic, and non-responsive. Their head and eyes are forced to the right.**

1. **What are you most concerned about?**
2. **What are your first steps?**
3. **What is the definition of** *convulsive* **status epilepticus?**
4. **What is your treatment algorithm? (after you answer this question, turn to the last page of packet for some tips!)**

**BREAK**

**CASE 3**

**You receive a transfer from OSH for a pt who is in a “COPD” exacerbation. When you evaluate him at bedside you notice that he is tachypneic w/ shallow breathing. At first you assume that he is asleep but later note that he struggles to open his eyes or lift his head off of the bed**. **His voice is quiet and his speech is slurred**

**1. What are red flags for a neuromuscular cause of respiratory distress?**

**2. The patient is satting at 93% on room air. Are you reassured?**

**3. What is your differential for neuromuscular diseases that can cause subacute-acute respiratory collapse**

**4. You perform a motor exam on the patient. You note that his neck flexors are 2/5, his proximal arms are 3/5 and symmetric w/ 4-/5 strength in his hands. His LE are 4/5 throughout**. **Can you describe what this patient looks like without using numbers?**

**5. You also perform a sensory exam and notice no sensory loss or neuropathic pain. How does this change your differential?**

**6. You suspect myasthenia gravis, how to you formally make this diagnosis?**

**7. You this patient with myasthenic crisis, what is the treatment of choice?**

**8. If this person had instead had ascending sensory symptoms, loss of reflexes and you diagnosed them with Guillain Barre, how would you treat them?**

**9. What is the number one cause of death in patients with Guillain Barre?**

**CASE 4**

**You’re on long block when a patient comes in complaining of their neuropathy “acting up”. They said that normally their neuropathy goes to their mid shin but over the recent days it has quickly risen to their left side where they are numb up to their belly button. Sensory loss has progressed up the right side as well to their knee. Additionally, they’re noting weakness in their legs L>R**

**1. What red flags suggest that this is not their neuropathy acting up?**

**2. What additional question should be asked?**

**3. You perform a strength exam and note distal > proximal weakness. You move on to the reflex exam. How do you grade a reflex exam again?**

**4. How does your reflex exam help you determine CNS vs PNS pathology?**

**5. What’s the best next step in management?**

**6. What’s the difference between myelopathy and myelitis?**

**7. How to you treat the causes of emergent myelopathy?**

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