

Case Studies

*This is a self-evaluation tool – Please Fill in Answer Sheet and **turn in** at the End of the Conference*

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Seizures & Status Epilepticus Made Simple

A 15-year-old (60 kg) boy with a history of seizures managed with levetiracetam is found at home having a seizure. Although the seizure stops, he does not regain consciousness as quickly as normal and EMS is called. In the ambulance he has a blood pressure of 102/60 mm Hg, a pulse of 115/min, respirations of 16/min, and a saturation of 98%. A normal finger-stick glucose is obtained and he is transported to the hospital. Transport time is 15 minutes. On arrival he has not regained consciousness and as soon as he is placed on a bed he has a generalized tonic-clonic convulsion with grunting respirations, desaturation, and eyes deviated to the right with fixed and dilated pupils. The patient is placed on oxygen.

- Which of the following therapies would you order?
 - Lorazepam 2-4 mg IV
 - Diazepam 5-10 mg IV
 - Midazolam 2-5 mg IV
 - Lorazepam 4 mg IM
 - Midazolam 10 mg IM**
- Despite your choice of therapy, the patient continues to have convulsions and now his pulse is up to 150/min. Which of the following therapies would you administer?
 - Repeat the same therapy as before
 - Ketamine 1-2 mg/kg IV
 - Lidocaine 1-1.5 mg/kg IV
 - Loading dose of levetiracetam**
- Despite your attempts, the patient has not regained consciousness and has intermittent episodes of twitching, which you think might be continued seizure activity. You call for a neurology consult and order continuous EEG monitoring. What other therapies would you consider?
 - Phenytoin loading dose IV
 - Phosphenytoin loading dose IM
 - Phenobarbital loading dose IV
 - Propofol loading bolus and infusion with endotracheal intubation**
- After your intervention has been completed, the patient has no further motor activity but has not regained consciousness. His pulse is 120/min, his blood pressure is 135/82 mmHg, his oxygen saturation is 95%, and his tympanic temperature is 100.6 F. A non-contrast head CT is negative and his electrolytes are normal except for a low serum bicarbonate. Which of the following would you consider?
 - Admit to the ICU for continuous EEG monitoring
 - Add an additional anticonvulsant
 - Start antibiotics for a presumed aspiration
 - Perform a lumbar puncture**

-Continued Over-

Hot Topics in Sports Medicine AND Commonly Missed Injuries in the Young Athlete

A 16-year-old runner limps into the office with shin pain.

1. Shin pain can be bone-related or muscular.
True False
2. Stress fractures commonly occur in runners.
True False
3. Foot mechanics are linked to tibial stress fractures.
True False

Non-Traumatic Abdominal Emergencies: Red Flags & Nuances

An 11-day-old infant presents with increasingly forceful non-bilious vomiting during the past three days. His pulse is 170 bpm, his mucous membranes are tacky, and his capillary refill time is 2 to 3 seconds. His laboratory evaluation includes: Na+ = 129, K+ = 7.3, HCO3- = 10, Cl- = 103, and glucose = 52 mg/dL.

1. A pathognomonic abdominal for this patient is an “olive.”
True **False**
2. The most likely diagnosis is:
 - A. Urinary tract infection
 - B. Hypertrophic pyloric stenosis
 - C. Congenital adrenal hyperplasia**
 - D. Duodenal atresia
3. Your management most importantly includes:
 - A. Administration of a broad-spectrum antibiotic
 - B. Surgical consultation
 - C. Fluid resuscitation and administration of hydrocortisone**

The Febrile Infant: The Importance of Doing More, The Art of Doing Less

A 6-week-old infant comes in with fever at home of 100.6 °F. At home the child was feeding normally without vomiting, diarrhea, or cough. The infant has been congested for two days. The infant seemed a little fussy and felt warm so the parents checked the rectal temperature, called their PCP, and the patient was referred to the ED. The child was term, vaginally delivered, without significant risk factors for infection in the mother, and went home from the hospital on day two. The well child visit at two weeks was unremarkable and the infant has been gaining weight. There have been no hospitalizations or surgeries. In the ED, the temperature is 101.1°F, the infant appears well, with a heart rate of 140, respiratory rate of 36, BP 75/54, and saturations 97% on room air. The general physician exam is normal except for mild nasal congestion. Specifically the ears and throat are normal, the TMs are normal, and there is no respiratory distress.

1. The infant looks so well without focal findings and an unremarkable past that no testing should be done.
True **False**

The Febrile Infant: The Importance of Doing More, The Art of Doing Less (continued)

2. Deciding to do further testing, you elect to order...
 - A. CBC and blood culture
 - B. UA and urine culture
 - C. LP with CSF studies, including culture
 - D. **A & B**
 - E. A, B, and C

3. If the UA reported: nitrite (+), LE (mod), 10 wbc, and 2+ bacteria, with all else normal, then the best management would be to:
 - A. Send home and call next day with urine culture results. If culture is positive, then start oral antibiotics.
 - B. Send home with an oral antibiotic
 - C. **Admit for IV antibiotics, consider for LP (if not already done)**

Hypertension in the Pediatric Patient

A 3-year-old boy is seen in the emergency department with a new onset seizure, obtundation, and a blood pressure of 162/112.

1. The best choice for initial therapy of this child would be:
 - A. Oral Lisinopril
 - B. Intravenous furosemide
 - C. Oral hydralazine
 - D. **Intravenous labetalol**

2. The *single test* with the highest likelihood of diagnostic yield in this child would be a:
 - A. Echocardiogram
 - B. **Urinalysis**
 - C. CT angiography
 - D. Measurement of plasma renin and aldosterone

3. With control of blood pressure, the child's seizure activity stops, and he gradually awakens. By the next day, his neurologic status is completely normal. Which of these approaches would be the most reasonable?
 - A. Obtain an EEG to determine if a course of anticonvulsants would be appropriate
 - B. Obtain a head CT examination with contrast, with plans to begin anticonvulsants only if a structural lesion were identified
 - C. **Do not begin anticonvulsants**
 - D. Provide a loading dose of levetiracetam, and then begin oral therapy regardless of the results of EEG or imaging