



The Corner

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35. Status epilepticus in the ED

EMS Doctor: Good morning. I bring Jack, a 4-year-old boy, with a seizure. He has no past medical history. He was at school when he lost consciousness and began with a tonic-clonic spell 30 minutes ago. We have already administered 2 mg oral midazolam and 2 mg IV midazolam, and one dose of levetiracetam (30 mg/kg), but we haven't been able to stop the seizure. His weight is 17 kg. He doesn't have fever or other signs of infection.

ED doctor: Good morning. Alright. Please bring him straight to the resus room. Does he have any hemodynamic or respiratory compromise?

EMS doctor: No, he has a heart rate of 80 bpm, his blood pressure is 104/59 mmHg, his O2 sat is 100% with 1L of oxygen through nasal cannula and his respiratory rate is 26 bpm with no respiratory distress and normal auscultation.

ED doctor: Thank you very much, have a good shift.

EMS doctor: Thank you, goodbye.

ED doctor (talking to the nurses): Please monitor him STAT, do a capillary glycemic test and we also need a complete blood test with VBG and another IV line. The boy is still unconscious with trismus and erratic movements of extremities, so let's complete the dose of levetiracetam with another 170 mg, followed by 20 mg of phenytoin.

ED doctor (talking to the resident): Alice, please order a full blood test including CBC and CMP, and complete the physical examination. I'm going to call the PICU and let them know we have a status epilepticus and talk to the radiologist to order a CT scan.

Alice: Very well.

The PICU team arrives.

PICU doctor: Hello, where are we at?

Alice: The seizure has apparently stopped with the phenytoin. Right now he doesn't have trismus, erratic movements or eye deviation, but he maintains impaired awareness with a GCS of 8/15. His blood glucose is 90 mg/dl, his electrolytes are normal and he has a mixed acidosis with pH 7.19, pCO₂ 66 mmHg, BE -3 mmol/L and lactic acid 3.6 mmol/L. The rest of the lab results are pending and the CT scan has been ordered. Rapid tests for Influenza, RSV and SARS-CoV2 are negative.

ED Doctor: I can see his BP is a bit high now and his heart rate is falling to 70 bpm, so he may be starting with intracranial hypertension.

PICU doctor: Yes, let's push 100 ml of hypertonic saline. We'll take him to the CT scan and wait for the results before we proceed with the lumbar puncture. After the CT scan we'll admit him directly to the PICU, monitor his brain function and complete the study and treatment of encephalitis.

ED doctor: OK, thank you very much. The echocardiogram and urine drug screening are left to be done. The parents are waiting outside.

PICU Doctor: We'll keep that in mind and talk to his parents. Bye!

KEY WORDS

Status epilepticus: estatus convulsivo.

Seizure: convulsión.

Lost consciousness: pérdida de consciencia.

Tonic-clonic spell: crisis tónico-clónica.

Resus (resuscitation) room: *box* vital.

Hemodynamic or respiratory compromise: compromiso hemodinámico o respiratorio.

Nasal cannula: cánulas nasales.

STAT: inmediatamente.

Capillary glycemic test: test de glucemia capilar.

VBG (venous blood gas): gasometría venosa.

IV line: vía intravenosa.

Dose: dosis.

CBC (complete blood count): hemograma.

CMP (complete metabolic panel): bioquímica.

PICU (Pediatric Intensive Care Unit): Unidad de Cuidados Intensivos Pediátricos (UCIP).

CT (Computerized Tomography) scan: Tomografía Computarizada (TC).

Eye deviation: desviación de la mirada.

GCS (Glasgow Coma Scale): escala de coma de Glasgow.

Electrolytes: electrolitos (iones).

Mixed acidosis: acidosis mixta.

Results are pending: los resultados están pendientes.

Intracranial hypertension: hipertensión intracraneal.

Hypertonic saline: suero salino hipertónico.

Lumbar puncture: punción lumbar.

Encephalitis: encefalitis.

Echocardiogram: ecocardiograma.

Urine drug screening: tóxicos en orina.



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