

# Case Based Learning Series

“Student Led Adult Learning”



Seed  
GLOBAL HEALTH

## Clinical Pathologic Case (CPC)

Emergency Medicine Case Based Series

THEME:

### Obstetrics & Gynecology Emergencies

“She had multiple jerky movements”



Date: Fri 31st October 2025  
Time: 7:00pm - 8:00pm (EAT)



Expert



**Dr Aggrey Lubikire Joseph**

Obstetrics Anaesthesiologist and Intensivist

Presenter



**Katushabe Bridget Ericah**

Makerere University, year 5  
MBChB (MAK-EMIG)

Pre Hospital Presenter



**Kusseewo Aukasha**

St. Michael Lubaga Hospital



SCAN QR CODE TO REGISTER



# Presenting Complaint

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25-year-old female **G5P<sub>3+1</sub>** at **25 WOA**

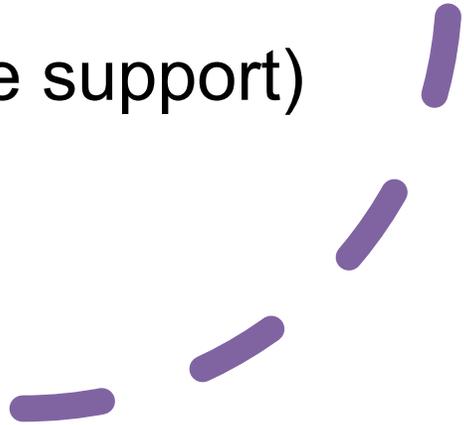
## **Presenting complaint**

Generalized jerky body movements x 1/7

Difficulty in breathing x 1/7



# Pre-hospital Care Preparation

- **Staff:** 2 paramedic and an ambulance operator
  - **Patient:** one patient currently emergent
  - **Equipment/Medication:** Communication devices, patient monitor devices, IV fluids, OPA, suction device, non-rebreather mask, and medications, including analgesics, anticonvulsants (diazepam)
  - **Ambulance:** Type B (Basic life support)
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# ISBAR Report

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**Identity:** I am Kussewo Aukasha, an EMT dispatched together with my team to pick up the patient

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**Situation:** A 25yr old woman with multiple jerky movements and difficulty breathing

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**Background:** She is a G5P3+1 at 25WOA with an episode of seizures lasting at least 5 minutes

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**Assessment:** Airway was at risk, had difficulty in breathing, cold peripheries, CRT>3sec, weak, fast pulse, BP 98/53mmHg and generalized seizures.

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**Recommendation:** continuous oxygen therapy, and patient monitoring, try other anti convulsant, pelvic and abdominal scan, umbilical artery doppler, RFTs

# Primary Survey

- **Airway:** at risk due to reduced LOC, seizures
- **Breathing:** Noisy breathing(transmitted sounds in chest), RR-32 bpm, SPO<sub>2</sub> 87% on RA
- **Circulation:** cold peripheries, CRT 3s, weak fast pulse, BP=98/53mmHg
- **Disability:** Witnessed 2 generalized jerky body movements lasting about 5 and 4 minutes with LOC[**GCS** =12/15 (E=4, V=4, M=4)], confusion, eye rolling, rhythmic jerking of limbs, no frothing, no urinary or faecal incontinence, RBS-6mmol/L

**Exposure:** Cold extremities but T =37°C, severe pallor, no PV bleeding

# Poll 1

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From the above history and assessment,  
what are the imminent emergencies in  
this patient?

# Expert

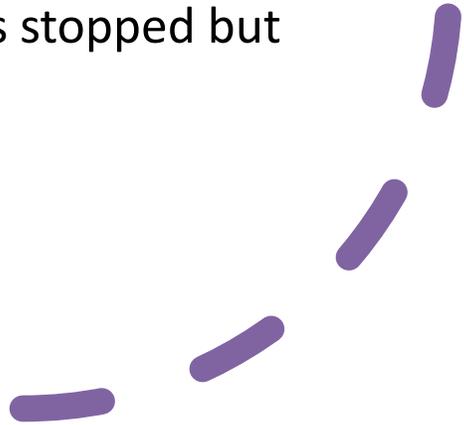


What are your initial thoughts?



What is your preparation and approach to this patient?

# ED Intervention

- **AIRWAY:** placed in lateral decubitus position
  - **BREATHING:** 3litres of oxygen via nasal prongs; SPO2:98%, after 10 minutes SPO2 86%, upgraded to 10L/min O2 via NRM, SPO2 improved to 97%, IV hydrocortisone 100mg stat, RR: 24breaths/ minute
  - **CIRCULATION:** 1L of normal saline via 2 18gauge iv cannulas alternating with D5 to prevent any hypoglycemia, samples taken off, BP-98/53 pulse; 101 bpm
  - **DISABILITY:** 200mg of phenobarbitone followed by 1g of phenytoin in 500mls of NS but no improvement, 14g of MgSO4 loading dose then given , convulsions stopped but GCS still 12/15 (E4V4M4)
  - **EXPOSURE:** no bleeding or injuries
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# SAMPLE History

- **Signs & Symptoms:** abnormal jerky body movements, with associated fever and DIB
- **Allergies:** none
- **Medications:** fefo, multivitamins, clexane
- **Past Medical History (PMH):** Seronegative, no known chronic illness. Treated for malaria in pregnancy at 16WOA, had threatened abortion and cervical cerclage was done
- **Last Meal:** 3 hours before admission
- **Events Leading to Presentation:** Been unwell for 2/7 with fevers and joint pains. Later developed these abnormal movements. Had 4 episodes with subsequent LOC



# Audience

- Any additional information?



# Expert opinion?



Any additional thoughts  
at this point?



Any additional info you  
would want to get?



# Secondary survey

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- **HEAD AND NECK:** soft neck ,severe pallor, no jaundice, no jugular distension
- **CHEST:** *inspection; intercostal* and subcostal recessions, hyperactive precordium,  
*palpation;* trachea was centrally placed with reduced chest expansion,  
*percussion;* dullness marked in the right supramamary region, *auscultation;* transmitted breath sounds marked in the supramamary region bilaterally, coarse crackles over the right supramamary region
- **ABDOMEN:** on inspection, grossly distended. palpation, no tenderness, FH;24/40, no other organomegalies, FHHR(**154-155bpm**),
- **EXTREMITIES:** cold, weak, pale, cap refill>3s, no injuries
- **NEUROLOGICAL:** GCS=12/15 E4V4M4 normal bulk and reflexes
- **VE;** not done
- **Skin:** warm pale, no petechiae, or ecchymoses

# Poll 2

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What are your differential diagnoses for this patient?

# Differential diagnoses

DIFFERENTIAL DIAGNOSIS	IN VIEW OF
Cerebral malaria	Convulsions Fever History of treatment for malaria one month ago
Pre-eclampsia	Convulsions 25WOA
Severe Bronchopneumonia/Aspiration pneumonia	Difficulty in breathing Fever Hx. LOC Transmitted sounds
Pulmonary embolism	Difficulty in breathing Post cervical cerclage
Sepsis	Convulsions Low blood pressure Fever Difficulty in breathing
Undifferentiated shock, ??Septic	Cold peripheries, Increased CRT, reduced LOC, tachycardia, fevers

# LABS

TEST		RESULTS	NORMAL RANGES
1.	<b>Malaria blood slide</b>	+++ parasites seen	
2.	<b>Malaria RDT</b>	positive	
3	<b>Liver Function tests</b> Albumin Total protein ALT AST Bilirubin total Direct bilirubin	28.6g/dL 53.4g/dL 9u/L 16.5 3.3umol/L 1.5umol/L	35-52 64-83 0-55 5-34 3.4-20.5 0-8.6
4.	<b>Renal Function tests</b> Creatinine Urea Potassium sodium	44umol/L 3.4mmol/L 4.02mmol/L 134mmol/L	53-106 2.5-7.5 3.7-5.4 138-150
5.	<b>Complete blood count</b> Hb WBC Neutrophils platelets	3.5g/dL 18.22 8.41 135	11-16 5-13 4-11 150-400

# IMAGING

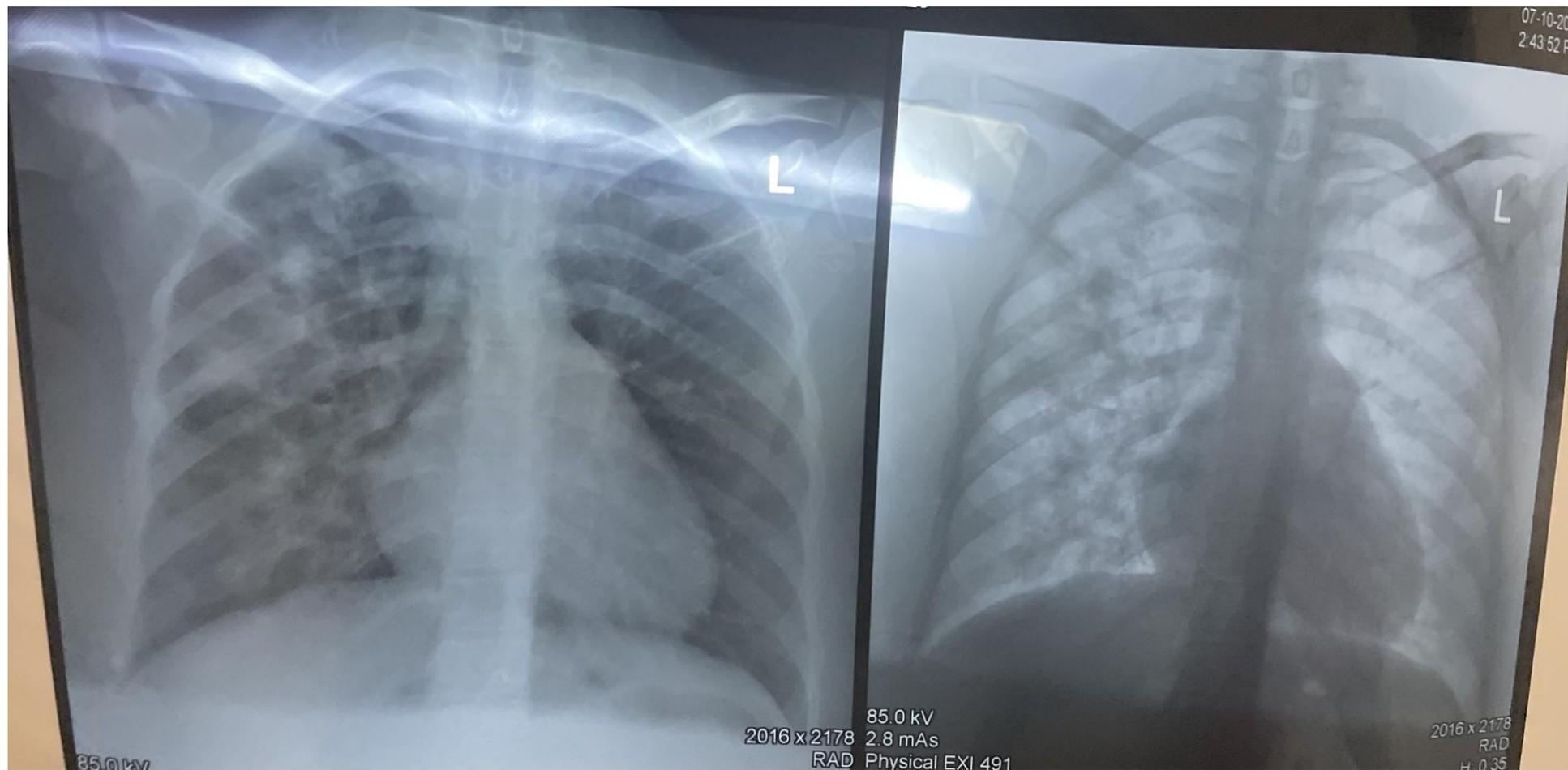
## **Abdominal ultrasound scan**

- Live intrauterine foetus at 24weeks, 6days of gestation in breech presentation. Normal foetal cardiac activity, closed cervix and adequate liquor.

## **Chest Xray**

- Patchy heterogeneous opacities(consolidations) in the right lung zones, suggestive of bronchopneumonia

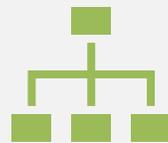
# Image



# Expert opinion



What are your differentials  
at this point



What is your management  
plan?

# Working diagnosis

G5P3=1 at 25WOA with

1. Malaria in pregnancy complicated by cerebral malaria and severe anemia
2. Broncho pneumonia

# Poll 3

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What are your specific  
management Priorities for this  
patient?

# Management plan

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i. Initial stabilization: ABCDE

- Managed convulsions; 200mg of phenobarbitone followed by 1g of phenytoin in 500mls then IV 14g of MgSO<sub>4</sub> loading dose

i. Investigations

ii. Specific therapy

- Malaria in pregnancy; iv artesunate 600mg at 0,12,24hours
- Severe anemia; transfused with 4 units of packed red blood cells
- Pneumonia; iv ceftriaxone, iv metronidazole and azithromycin 500mg OD

Expert

Pearls and pitfalls

# SEIZURES IN PREGNANCY

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**Definition:** Sudden, uncontrolled electrical activity in the brain presenting with tonic-clonic movements, loss of consciousness, or altered awareness.

**Types:**

- *Eclampsia* (pregnancy-related seizures with elevated blood pressure >140/90mmHg).
- *Pre-existing epilepsy* (known seizure disorder).
- *New-onset seizure* (secondary to other causes like malaria, hypoglycemia, electrolyte imbalances).

**CAUSES**

**Pregnancy-related:**

- *Eclampsia* ( $\geq 20$  weeks or postpartum)
- *Severe preeclampsia*

**Non-pregnancy related:**

- Pre-existing epilepsy
- Cerebral malaria
- Metabolic derangements (hypoglycaemia, hyponatremia)
- CNS infection (meningitis, encephalitis, malaria)
- Cerebral venous thrombosis
- Stroke or intracranial haemorrhage
- Drug toxicity or withdrawal

# RECOGNITION

## Clinical features:

- Generalized tonic-clonic movements
- Loss of consciousness
- Tongue biting, urinary incontinence
- Postictal confusion

## Danger Signs

- Seizure during pregnancy or postpartum
- Hypertension, headache, visual disturbances, right upper quadrant pain
- Altered mental status post seizure
- Prolonged or recurrent seizures → risk of *status epilepticus*
- Signs of foetal distress (reduced movements, abnormal foetal heart rate)

**Immediate danger:** maternal hypoxia, aspiration, trauma, and foetal hypoxia.

## IMMEDIATE MANAGEMENT

**Triage:** Identify danger signs ; convulsions, unconsciousness, respiratory distress, shock.

**AIRWAY:** Position on left lateral side, clear airway, suction, oxygen.

**BREATHING:** Administer O<sub>2</sub>, monitor saturation.

**CIRCULATION:** IV access, avoid supine position, monitor BP and pulse.

**FOETUS:** Monitor foetal heart rate if ≥24 weeks.

**BLOOD TESTS:** glucose, MRDT, CBC, electrolytes, renal & liver function, urinalysis for protein.

# MANAGEMENT

## <20 WEEKS OF GESTATION

- Eclampsia is *less likely* → search for alternative causes (e.g., cerebral malaria, epilepsy, CNS infection, metabolic causes).

### Anticonvulsant treatment:

- Benzodiazepines for acute seizure control (e.g., *diazepam 5–10 mg IV slowly*).
- If recurrent → *phenytoin or levetiracetam* (safer in pregnancy).

**Investigate underlying cause** (neuroimaging, MRDT, glucose, electrolytes).

- **Avoid valproate** due to teratogenicity.
- **Stabilize and refer** for neurologic or obstetric co-management.

## >20 WEEKS OF GESTATION/POSTPARTUM

- **Assume eclampsia until proven otherwise.**

### Immediate management:

- *Magnesium sulphate* is the drug of choice:
  - Loading: 4 g IV over 5–10 min + 10 g IM (5 g in each buttock).
  - Maintenance: 5 g IM every 4 hours (if no toxicity).
- Control BP: *Labetalol, hydralazine, or nifedipine*.
- Monitor urine output, reflexes, respiratory rate.

- **Stabilize mother first**, then plan for **delivery** once stable at least within 24 hours (definitive treatment for eclampsia) mode of delivery according to obstetric assessment.

- **Avoid diazepam or phenytoin** unless magnesium is contraindicated or unavailable

# RESOURCES

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1. WHO. Recommendations for Prevention and Treatment of Preeclampsia and Eclampsia. Geneva: WHO, 2011.
2. NICE Guideline NG133: Hypertension in Pregnancy: Diagnosis and Management, 2023.
3. Maguire J, et al. Seizure management in pregnancy. *Obstetric Medicine*, 2020;13(2):63–70.
4. Royal College of Obstetricians and Gynaecologists. Green-top Guideline No. 10A: Eclampsia and Pre-eclampsia, 2022.
5. Life in the fast lane, available from: [liftl.com/eclampsia-ff/](https://liftl.com/eclampsia-ff/).

# CPC -Case-Based Discussion Wall of Fame

TOPIC	PRESENTER	EXPERT	MODERATOR	MENTOR	DIAGNOSIS
Altered Mental Status	Dr. Jimmy Atyera	Dr. Kenneth Bagonza	Dr. Daniel Olinga		Atrial Fibrillation
I Can't Breathe	Regan Kakande MBChB V	Dr. Doreen Okong	Dr. Anna Kaguna	Dr. Daniel Olinga	Tension Pneumothorax
My Neck is Stuck	Dr. Emmanuel Mbaruk	Dr. Joseph Kalanzi	Dr. Anna Kaguna	Dr. Tracy Walczynski	Tetanus
It keeps dripping	Henrietta Lunkuse MBChB V	Dr. Ambrose Okello	Dr. Anna Kaguna	Dr. Robert Wangoda	Rectal Polyp
I'm yellowing and can't pee	Doreen Ndagire Sanga MBChB IV	Dr. Linda Nalugya	Dr. Anna Kaguna	Dr. Deo Edemaga	Hepatorenal syndrome
I fell off a boda-boda	Tithi Tripathi, MBChB IV Jane Nalunkuuma EMT II	Dr. Prisca Kizito	Dr. Danioel Olinga	Dr. Doreen Okong Andrew Okiror	Lung Re-expansion syndrome
Breathless, Yet Breathing Deep	Rebecca Asimire Winfred Kingfred Wangechi EMT II	Pius Opejo	Dr. Anna Kaguuna		Diabetic Ketoacidosis
My Body is paining	Maria N. Namujja, MBChB V Melvin Bongozana EMT II	Dr. Joseph Emuron	Dr. Anna Kaguna	Dr. Baturaki Amon	Acute Kidney Injury
I feel them crawling	Patience Kwagala MBChB V Evy Obare, BSc. Paramedical	Dr. Gumisiriza Nolbert	Dr. Jimmy Atyera		Alcohol Withdrawal Syndrome
Baby has a fever	Nyesigamukama Hamson MBChB V Banura Deborah Kirabo	Dr. Jaimini Popet	Dr. Daniel Olinga	Dr. Kaina Vincent	Complex febrile convulsions
She had Multiple Jerky Movements	Katushabe Bridget Ericah MBChB V Kussewo EMT II	Dr. Aggrey Lubikire Joseph	Dr. Daniel Olinga		Complicated Malaria in Pregnancy

CPC Secretariat: Emmanuel Okumu , Andrew Twineamatsiko, Bonaventure Ahaisibwe , Jimmy Atyera, Daniel Olinga, Anna Kaguna