Clinical Pathological Case (CPC)

Seed
GLOBAL HEALTH

CPC
CASE-BASED LEARNING SERIES
"Mastering Emergency Care"

Disclaimer

Clinical Pathological Case training videos are for educational purposes and should not be used as the sole source of reference during patient care. Always refer to official guidelines and consult qualified professionals before applying any practices

Case Based Learning Series

"Student Led Adult Learning"

Clinical Pathologic Case (CPC)

Emergency Medicine Case Based Series



THEME:

He Occasionally gets Confused

Date: 24TH JUL 2026 | **Time:** 7:00 PM - 8:00 PM

Expert



Dr Baluka Connie
EM Physician
City Ambulance

Case Presenter



Bwire Silas
MBChB Year 4
Makerere University

Prehospital Presenter



Banura Deborah Kirabo
Emergency medical care student, Lubaga hospital

Presenting Complaint

33 y/M with a **1-day** history of;

- Episodes of confusion
- headache &
- dyspnea



Pre-hospital presentation

Patient Presentation

- 33 yr/M with C/o confusion, headache, dyspnea & burns for one day

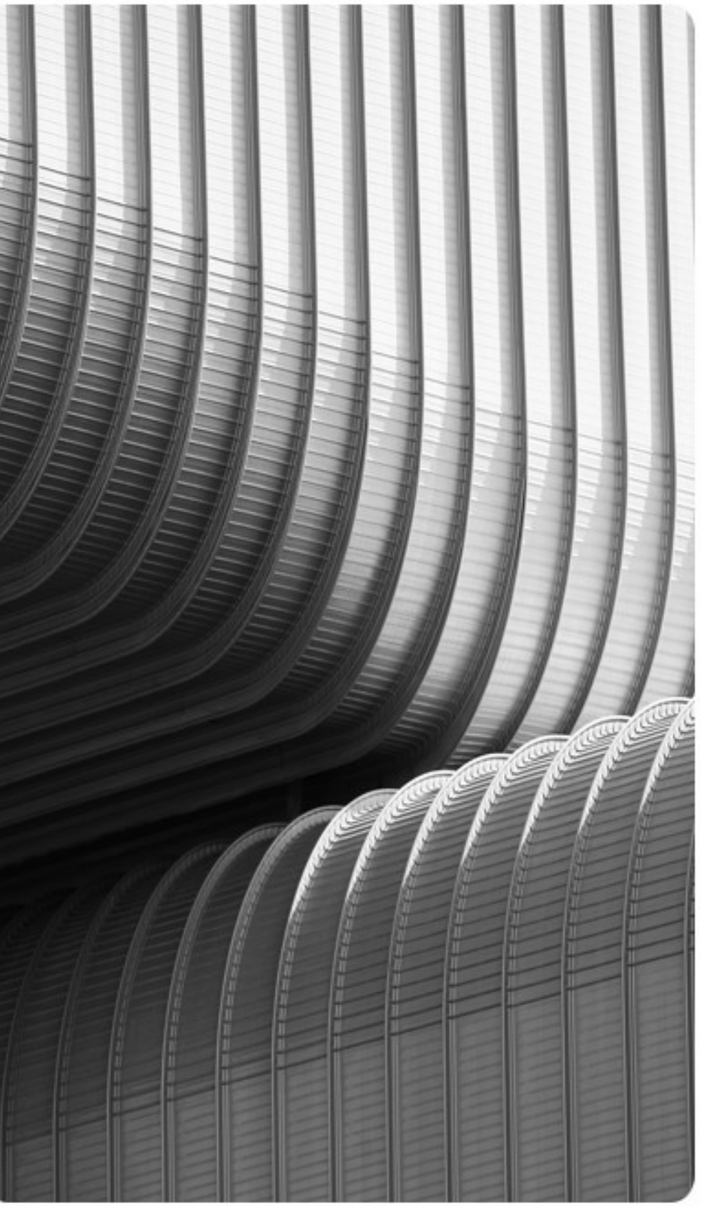
Transfer Details

- Inter facility referral
- Ambulance : Type B (BLS)
- Crew : 1 EMT & an emergency driver

Equipment and Requirements

- PPEs for crew
- Oxygen
- Nasal prongs
- Diagnostics (stethoscope, PPEs for crew
- Oxygen
- Nasal prongs
- Diagnostics (stethoscope, monitor, etc.)
- IV access
- IV fluids (NS,DS)
- Meds (IV PCM)
- Stretcher

ISBAR REPORT



Identity: I am Deborah, an emt dispatched for interfacility transfer of a 33 year old male

Situation: A 33 year old male being managed for episodes of confusion, head ache, dyspnea for one day and burns

Background:No known illnesses

Assessment: Airway patent, mild respiratory distress (RR-27b/min), Sp 02 96% on 5L via nasal prongs, PR-112b/min and BP-110/78mmHg

Management: Airways latency maintained, O2 still at 5litres via nasal pron gs, IV PCM administered to control the headache, burns around the scalp , neck and right hand dressed with primapole

Recommendations : Continuous reassessment ,do ECG and other blood tests to rule out any damages to internal organs, Psychological consult

Primary Survey

Airway: patient alert & speaking

Breathing: mild tachypnea 27bpm, SPO2 90% on RA

Circulation: warm extremities, cap refill <2S , PR-116, regular and full volume, BP 110/78mmHg, **MAP** of 88 mmHg

Disability: GCS 15/15 with occasional episodes of confusion, PEARL 4mm. Reduced movement of lower limbs vs upper limbs

Exposure : superficial partial thickness & deep partial thickness burns on scalp, neck, chest & right hand covering 21% TBSA

Poll 1

Which emergent condition should be prioritized in this patient?

Audience

- Any additional information?



Expert

- What are your initial thoughts?
- What is you preparation and approach to this patient?

Sample History

Signs & Symptoms:

- occasional episodes of confusion,
- Severe headache & anterograde amnesia
- progressively worsening DIB , restlessness
- Burns on the scalp, neck and right hand

Allergies: none known

Medications: none known

Past Medical History (PMH): no chronic illness

Last Meal; not known

Events leading to presentation: Electrocuted 2 hours before admission while on an electric pole for routine work ,**immediately lost consciousness** but regained after approx. 5 minutes, & sustained burns on the face, neck, and right hand that came into contact with the wire

ED Intervention

Airway: cervical collar for suspected C-spine injury

Breathing: 5L of oxygen via nasal prongs & continuous SPO_2 monitoring

Circulation: 18G cannula, IV fluids using Parkland formula ,RL 1L stat, then ***1490mls over 8hours***. Then remaining **2940ml over next 16 hours**. Monitored urine output using catheter.

Disability: None

Exposure: apply burn cure on the burns, dressings with gauze

Secondary survey

- **Head:** superficial partial thickness burns on the face and scalp
- **Neck.** burns on right side of the neck, trachea central, no midline cervical tenderness, JVD is not distended
- **Chest**: burns on right side equal air entry bilaterally
- **Abdomen:** Grossly normal
- **Extremities:** warm, cap refill of 2s, burn wounds on the right hand
- **Neurological:** GCS 15/15 **, reduced movement** of the lower limbs vs upper limbs and which worsened with course of hospital stay.
- **Skin: Right-sided** superficial & deep partial thickness on face, neck, chest and arm covering **21% TBSA**

Expert opinion?



Any additional thoughts at this point?



Any additional info you would want to get?

Poll 2

Which bedside investigation is most important immediately in this patient?

Differential diagnosis

Electrical burns with deep tissue injury. In view of superficial and deep partial thickness burns on scalp, neck, chest, arm

Cervical spine injury. In view of lower limb weakness

Mild Traumatic brain injury . In view of headache and episodes of confusion

Cardiac arrhythmia. In view of electrical burns and tachycardia

Respiratory failure; DIB and possible c-spine injury

Investigations

COMPLETE BLOOD COUNT (CBC)			
TEST	VALUE	INTERPRETATION	RANGE
WBC	**10.56*10^9/L**	**High**	4.00-10.00
Neu	**9.32*10^9/L**	**High**	2.00-7.00
HGB	12.8g/dL	Normal	11.0-16.0
BIOCHEMISTRY			
AST	**56.6**	**High**	0-35.0
Na	137.6mmol/L	Normal	137.0-147.0
K	3.96mmol/L	Normal	3.50-5.30
Cl	108.7mmol/L	Normal	99.0-110.0
creatinine	0.83mg/dL	Normal	0.79-1.30
urea	15.74mg/dL	Low	16.80-43.20
Urea-creatinine ratio	18.96	Low	40.00-100.00

Imaging

ECG; sinus tachycardia 110bpm, however no other changes observed, no arrhythmias observed

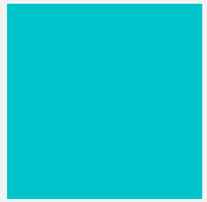
MRI done; imaging of cervical spine demonstrated changes suggestive of **edema** from **C3 to T2** with an intact spinal cord.

Repeat MRI after 8 days ; interval development of cord swelling and acute ischemic infarction.

Poll 3

Despite initial stabilization, the patient develops worsening lower limb weakness. Repeat MRI demonstrates spinal cord swelling with acute ischemic infarction. Which diagnosis best explains this deterioration?

Expert opinion



What are your differentials at this point



What is your management plan?

Working Diagnoses

1. Superficial and deep partial thickness electrical burns with deep tissue injury

2. Cervical spine injury

Management Plan

Patient was put on oxygen 5L nasal prongs
Iv paracetamol 1g tds
IV ceftriaxone 2g od
IV fluids (RL) 4430ml in first 24 hours
Wound dressing and wound care for the burns
C-collar to stabilize the c spine
Consult Ortho spine team for further management



Expert

Pearls and pitfalls?

Burns management

1. ABCDE Resuscitation
A: early intubation if airway compromise.
B: High-flow oxygen; assess for CO poisoning, pneumothorax, ARDS.
C: Fluid resuscitation (Parkland: **4 mL × kg × %TBSA) for a**dults with burns >20%
- Monitor urine output.
D: Assess GCS, neurological status, glucose.
E:. Assess TBSA% of burn using parkland, Lund & Browder chart etc

2. WOUND CARE
- Stop burning process
- cool the burn with lukewarm running water for approx. 20 minutes
- Clean, debride, and dress wounds(Vaseline gauze)
- Tetanus prophylaxis.
- Early surgical review for deep or extensive burns.
- Antibiotics?

General; monitor the patient at least for 24hrs

Pain management

Pharmacological Management

Multimodal analgesia: basing on WHO pain ladder

Step 1 mild pain; non opioids like PCM, aspirin

Step 2 mild- moderate pain; weak opioids like codeine + non opioids +,- adjuvant

Step 3 moderate - severe pain ; strong opioids like morphine, fentanyl + adjuvants

Non-pharmacological Measures

- psychological support.
- Control anxiety and relax patients.
- Physiotherapy and early rehabilitation.
- Adequate wound dressing

Major Burns Complications

General complications

- Wound infection and sepsis
- Hypovolemic shock
- AKI from rhabdomyolysis
- Hypothermia
- compartment syndrome
- Inhalational injury
- Contractures and hypertropic scars
- Multi-organ dysfunction

Electric burns specific

- Cardiac arrhythmias
- Deep tissue necrosis
- renal injury
- Nerve injury
- Spinal cord injury

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	Hennrietta 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 Asiimire Winfred Kingfred Wangechi EMT II	Pius Opejo	Dr. Anna Kaguuna		Diabetic Ketoaciodosis
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 Kusseewo 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					

TOPIC	PRESENTER	EXPERT	MODERATOR	MENTOR	DIAGNOSIS
Approach to the deteriorating trauma patient " I fell from a tree"	Kalimuzo Joseph Kusseewo Aukasha	Dr. Jacob Busingye	Dr. Jimmy Atyera		Traumatic Spinal Injury
The deteriorating peadiatric patient "my chest hurts"	Adrian Kiberu Charity Kayesu	Dr. Andrew Kimera	Dr. Emmanuel David Okumu		Heart failure secondary to rheumatic fever
I just can't catch my breath	Ankit Kalyani Nakyanzi Meble	Dr. Guloba Umarashid	Dr. Anna Kaguna	Dr. Ambrose Okello	ARDS
He is unresponsive	Dr. Akiyo Aluma Muhwezi Darius	Dr. Joseph Bonney	Dr. Daniel Olinga		Hypertensive Encephalopathy
He is burning up	Nyikiriize Abaasa Arinaitwe Godwin	Dr. Kenneth D. Bagonza	Dr. Anna Kaguna		Sepsis
He can't sit still	Baryamujura Hasina Kusseewo Aukasha	Dr. Benard Mwesigye	Dr. Daniel Olinga		DKA
He was Vomiting blood	Jasper Obale Aryatemba Durf	Dr. Emuron Joseph	Dr. Anna Kaguna		UPGIB
He Occasionally gets Confused	Bwire Silas Banura Deborah Kirabo	Dr Baluka Connie	Dr Daniel Olinga		Electrical burns Cervical spine injury
CPC Secretariat: Emmanuel Okumu , Ericah Katushabe, Andrew Twineamatsiko, Bonaventure Ahaisibwe , Jimmy Atyera, Daniel Olinga, Anna Kaguna					