



Seed  
GLOBAL HEALTH



# EMS ECHO 108 Patient Case

# Brief History

S.J a 20yr/F, P2+O in puerperium, presented to the burns unit 2 hours after flame incidence, in which she sustained burn wounds involving the face, neck, chest, the entire back and both upper and lower limbs after an electric short circuit that set the house on fire



Seed  
GLOBAL HEALTH





Seed  
GLOBAL HEALTH



# Primary Survey (Emergency Assessment)

**A**

Patent but threatened by possible inhalational burns

**B**

RR-24breaths/min, SPO2-100% on 5L/min via nasal prongs, symmetrical chest wall movement, no crepitations, transmitted sounds



Seed  
GLOBAL HEALTH



# Primary Survey (Emergency Assessment)

**C** Warm peripheries, CRT<2s, BP-167/102mmhg,PR-82b/min, normal volume, normal HS

**D** GCS- 14/15, PEARL, no seizures observed, RBS-6.8mmol/L

**E** Afebrile to touch, mixed thickness burns 70% TBSA had a urine catheter in situ, with 200mls of deep yellow urine (caretaker reports to have just emptied it )



Seed  
GLOBAL HEALTH



# Poll 1

From the history and primary survey, what are the imminent emergency in this patient?



Seed  
GLOBAL HEALTH



# What are the emergency Conditions?

THREATS	PRIORITY	Findings	Associated Risk
<b>A</b>	Facial burns with potential inhalational injuries	Facial edema	Airway Obstruction
<b>B</b>	Marked respiratory distress	RR–24bpm, transmitted sound	Respiratory Failure
<b>C</b>	Dehydration	PR= 135 bpm, skin barrier loss	Shock
<b>D</b>	Compartment syndrome Sepsis	Circumferential burns	Gangrene

# Poll 2

Based on the above information,  
what are your

**Emergency management  
options for**

this patient?



Seed  
GLOBAL HEALTH



# What are the emergency

THREATS	<i>Findings</i>	<i>Associated Risk</i>	<i>Immediate Action Taken</i>
<b>A</b>	Facial edema	Airway Obstruction	Elevate the head of bed Intubation with MV (airway protection)
<b>B</b>	RR–24bpm, transmitted sound	Respiratory Failure	O <sub>2</sub> therapy 5L/min by NP
<b>C</b>	PR= 135 bpm, skin barrier loss	Shock	Fluid therapy (Parkland formula) Wound dressing
<b>D</b>	Circumferential burns	Gangrene	Escharotomy



Seed  
GLOBAL HEALTH



# SAMPLE History

## Signs & Symptoms

Presented with burn wounds on the face, neck, right chest/abdomen, entire back and both lower and upper limbs with a TBSA of 70%

## Allergies

**None**

## Medications

None



Seed  
GLOBAL HEALTH



# SAMPLE History

<b>PMH</b>	No hx of chronic illness
<b>Last Oral Intake</b>	About 4 hours before the presentation to the burns unit
<b>Events Leading Up to Presentation</b>	House caught fire (electrical short circuit), involving the whole neighborhood that left many dead.

# Secondary Survey (Head-to-toe examination)

## RELEVANT POSITIVES

**G/E:** Lying supine, anxious, restless, with a swollen, tense face, and pain on passive movement of the limbs

**CNS:** GCS-14/15, soft neck, PEARL,

**R/S:** RR =24bpm,

**CVS:** CRT - <2secs, PR- 135, BP- 167/102mmHg.

## RELEVANT POSITIVES

**MSSK:** Mixed-depth burn(mostly deep partial thickness wounds ~ 70% TBSA, on the face, lateral side of the neck, right lateral anteroposterior trunk and both upper/lower limbs, pale and dry with circumferential burns over both upper/lower limbs



Seed  
GLOBAL HEALTH



# Poll 3

What are the **essential**  
**emergency bedside**  
**investigations** for this patient?



Seed  
GLOBAL HEALTH



# Investigation

INVESTIGATION	RESULTS ON ADMISSION	DAY 3 RESULTS
CBC	WBC=43.8, NEUT#=31.9, Hb =13.5, plt = 835,	WBC= 28.6, NEUT#=25.0, NEUT% = 87.4, Hb=12.4, plt =379,
LFTs	Albumin = 24, ALT=50.55(0-55), AST = 52.16(5-34)	Albumin = 20, ALT=118.53(0-55) AST=53.82.(5-34)
RFTs	Cr = 75.1, urea =3.1,	Cr = 145
electrolytes	Na+=139, K+=4.1, Cl = 107	Na+=139, K+=6.0, Cl = 104



Seed



# Problem lists

1. 70% mixed thickness burns at risk of sepsis
2. Circumferential burns at risk of compartment syndrome
3. Inhalational burn Injuries at risk of airway obstruction
4. Dehydration at risk of shock
5. Hyperkalemia at risk of arrhythmias
6. Risk of hypothermia

# Supportive management

- Maintain airway patent
- Oxygen therapy 5L/min by nasal prongs
- Pain management = Iv paracetamol 1g tds x 3/7 and IM tramadol 100mg tds 3/7
- Wound care – wound dressing
- Iv fluids 13L resuscitation, then 2L in 24hrs.
- Iv dexamethasone: iv dexamethasone 8mg bd x3/7
- Educated on a protein diet to correct the hypoalbuminemia



Seed  
GLOBAL HEALTH



# Specific Management

- Infection: iv flucamox 500mg tds x 5/7
- Hypoalbuminemia = iv albumin 3% 100mls bd x 3/7
- Hyperkalemia
  - iv calcium gluconate 10% – 10ml over 2 – 5 mins
  - Iv soluble insulin 10IU with 50mls of D50%.



Seed  
GLOBAL HEALTH



# Disposition Plan

Burns  
unit

ICU



Seed  
GLOBAL HEALTH



# Thank you

*And now for the nursing perspective...*



Seed  
GLOBAL HEALTH

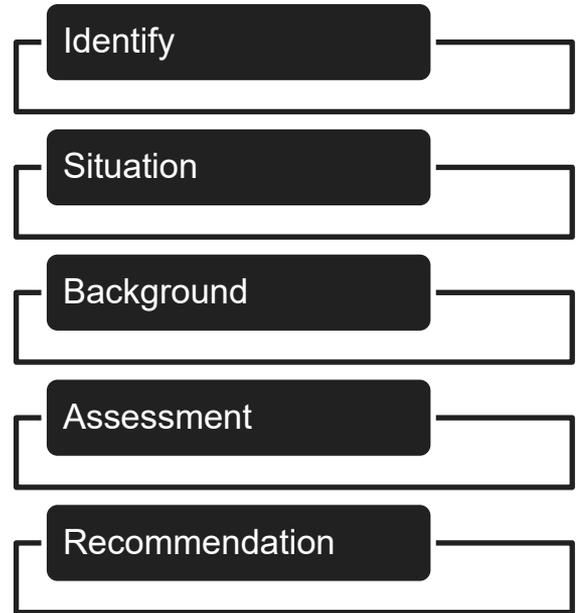


*Prehospital team:*

# What do you need to prepare for pre-hospital care for this patient?

- Staff
- Patient
- Equipment / Medications
- Mode of transport
- Documentation/Handover

Mr Ssenkumba Joseph, EMT,  
Head of Training AAPU, ERC &  
ITLS Course Organizer UG



Seed  
GLOBAL HEALTH



*Nursing team:*

Is there anything else you would like to know now?

What are the **nursing priorities** for this patient during their ED stay?

Ms Arthur Promise, ANO at the Burns Unit,  
Kiruddu NRH



Seed  
GLOBAL HEALTH



# *Now, let's dive into the Acute Care Management of this Patient's condition*

Dr. Rose Alenyo, Plastic & Reconstructive Surgeon,  
Kiruddu NRH, Senior Lecturer at MakCHS and Panel  
Head for Plastic Surgery Training & Exams at COSECOSA

*How should you approach this patient as ER doctor?*



Seed  
GLOBAL HEALTH



Thank you