Case Based Learning Series

"Student Led Adult Learning"

CPC | EMERGENCY MEDICINE
Case Based Learning Series

MY NECK IS STUCK

DATE
28TH
FEB. 2025

TIME
7PM
TO
8PM

PRESENTER

DR. EMMANUEL CHIVATSI M'BARUK
EM Resident MUST, MBChB (KIU)

EXPERT

DR. JOSEPH KALANZI
MMED (MAK), MSc (UCT)
MBChB (MAK)
PhD scholar (UCT)

ZOOM LINK https://zoom.us/meeting/register/6q0IMXvgSNGquorpr373fg

FUMSA

Seed GLOBAL HEALTH

Brief History

22Y/M referred from a nearby GH with 1/52 history of:

- Painful muscle spasms
- Difficulty in swallowing
- Neck rigidity
- Inability to walk or sit

Primary Survey

- **Airway: P**atent and protected
- **Breathing:** RR=32 bpm, SPO2 98% on R.A, symmetrical chest wall expansion, central trachea, resonant to percussion, bi-basal crepitations
- **Circulation:** warm extremities, CRT <2s, PR= 98bpm, regular, full volume, BP 144/98mmHg, normal HS
- **Disability:** GCS 15/15, PERRLA, persistent spasms, RBS 4.3mmol/l
- **Exposure :** Afebrile, dry mucous membranes, no obvious marks/signs of trauma

SAMPLE History

- **Signs & Symptoms: N**eck pain, shoulder pain and back pain for 2/52; inability to eat or drink and muscle aches for 1/52
- **Allergies:** Unremarkable
- **Medications:** amoxicillin, metronidazole, diclofenac and paracetamol
- **PMH/PSH:** Unremarkable
- **Last Meal:** >12 hours prior to admission
- **Events:** None

Audience

Any additional information?

Expert

What are your initial thoughts?

What is you preparation and approach to this patient?

SAMPLE History

Events Leading to Presentation:

- Pricked by a dry stick while herding cattle 3/52 ago, got retained FB, used local remedies to remove it
- Progressive swelling of the foot, followed by 1/52 h/o neck, back, shoulder, and abdominal pain
- Painful jaw spasms, difficulty swallowing, generalized muscle spasms, and stiffness, eventually rendering him unable to sit, walk, eat, or drink
- Despite outpatient treatment, his condition worsened prompting his referral to MRRH

Expert opinion?

Any additional thoughts at this point?

Any additional info you would want to get?

ED Intervention

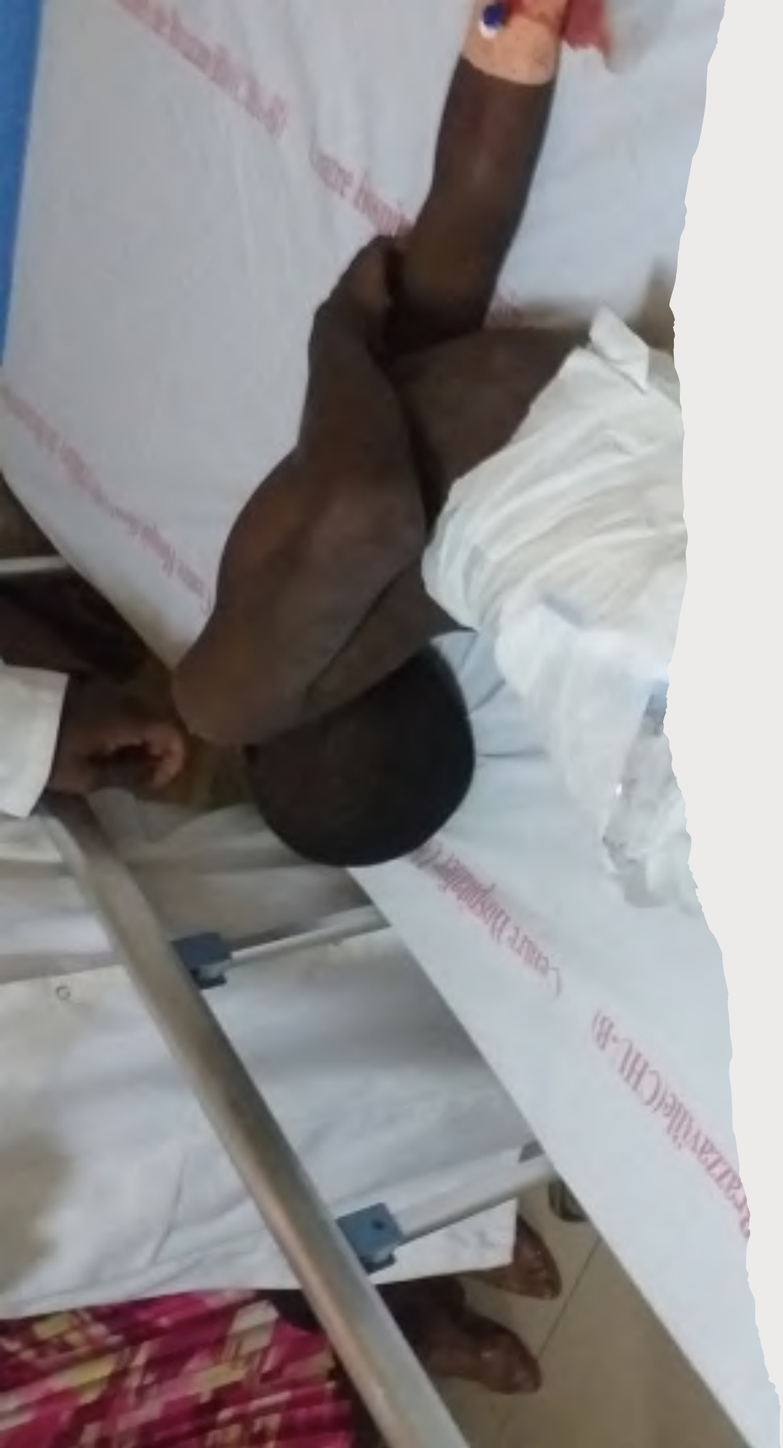
Airway & Breathing: Planned transfer to ICU due to anticipated need for airway protection and ventilatory support

Circulation: I.V fluids 500mls 4 hourly; Dextrose 10% alternating with Normal Saline

Disability: I.V Diazepam 10mg alternating with I.V Chlorpromazine 25mg every 2 hours, pressure area care and prevention of secondary tongue injury

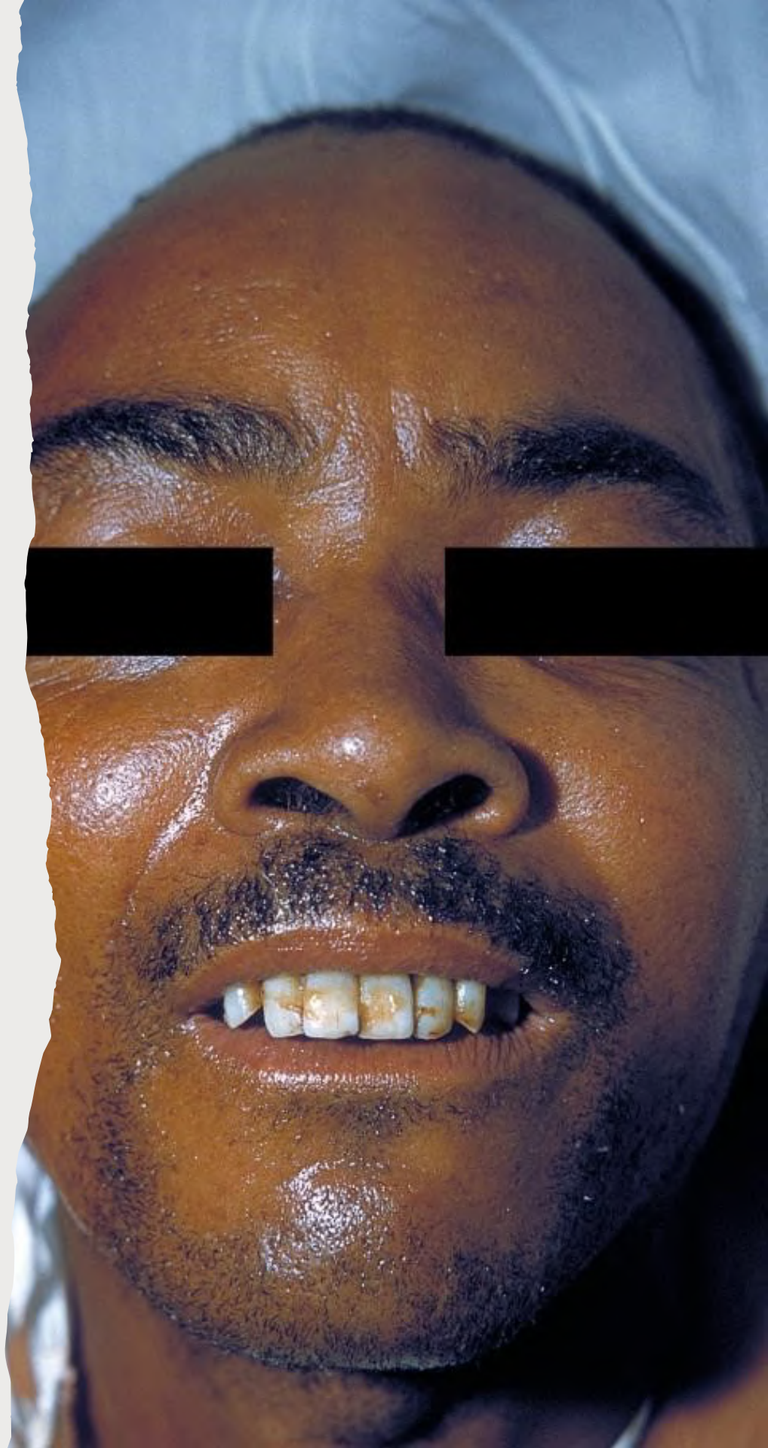
Exposure: TT IMG 500IU; given 250IU locally at the wound and 250IU given I.M, consulted surgery for debridement

Medications: I.V Morphine 6mg 6 hourly, I.V Metronidazole 500mg 8 hourly and I.V Flucloxacillin 500mg 8 hourly



Secondary survey

- **Head and Neck:** opisthotonus position, risus sardocinus
- **Chest:** RR= 32 bpm, SPO2 98% on R.A, symmetrical chest wall expansion, central trachea, resonant to percussion bilaterally, equal air entry bilaterally with vesicular breath sounds, bi-basal coarse crepitations
- **Abdomen:** Normal fullness, moving with respiration, mild generalized tenderness on palpation, no organomegaly, normal bowel sounds.

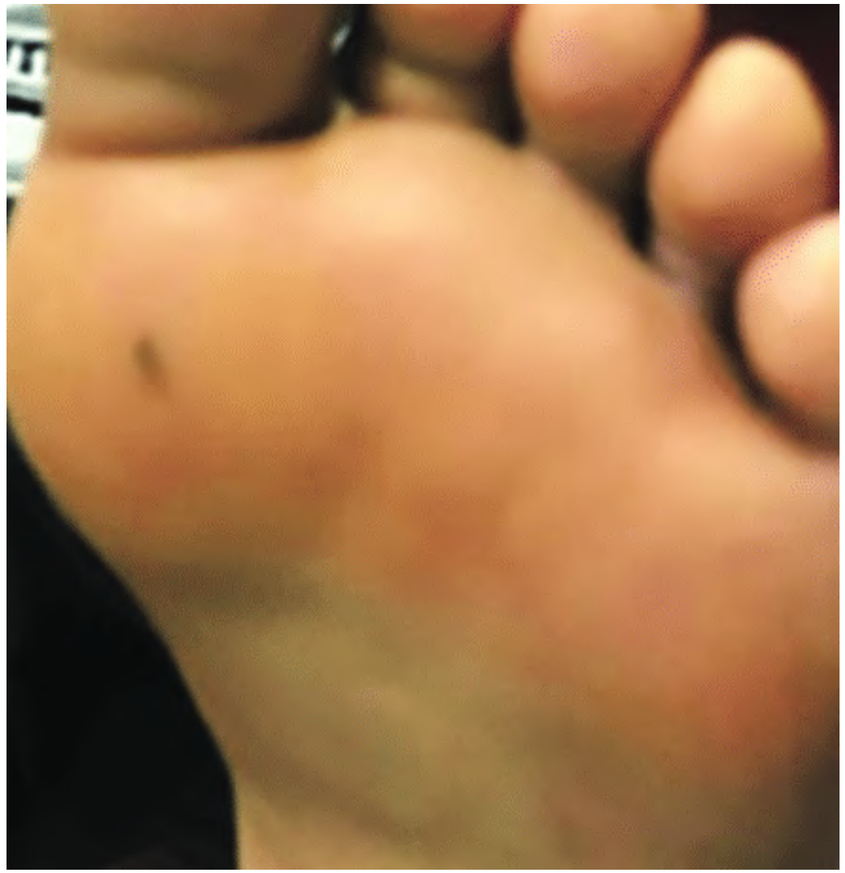


Secondary survey

- **Extremities:** Spasms involving the UL, LL & back about every 3 – 5 minutes, UL adducted at the shoulder and flexed at the elbows, LL extended at the hip & knee joints

- **Neurological:** GCS=15/15 (BM 6/6, BV 5/5, ER 4/4), PERRLA (3mm bilaterally), global hypertonia

- **Skin:** Dry non discharging scar on the plantar aspect of the right foot about 1cm by 1cm, with a central hyperpigmented area and normal surrounding soft tissue, no tenderness on palpation



Labs and imaging

1

Serum Creatinine 0.52mg/dl (0.7 – 1.3)

2

Blood Urea Nitrogen 10.8mg/dl (10 – 50)

3

Urinalysis – No abnormality detected

Expert opinion

Gold standard vs reality

What is your management plan?

ED course

- He still had persistent spasms easily triggered by movement and sounds, had missed his Chlorpromazine dose as it was out of stock.

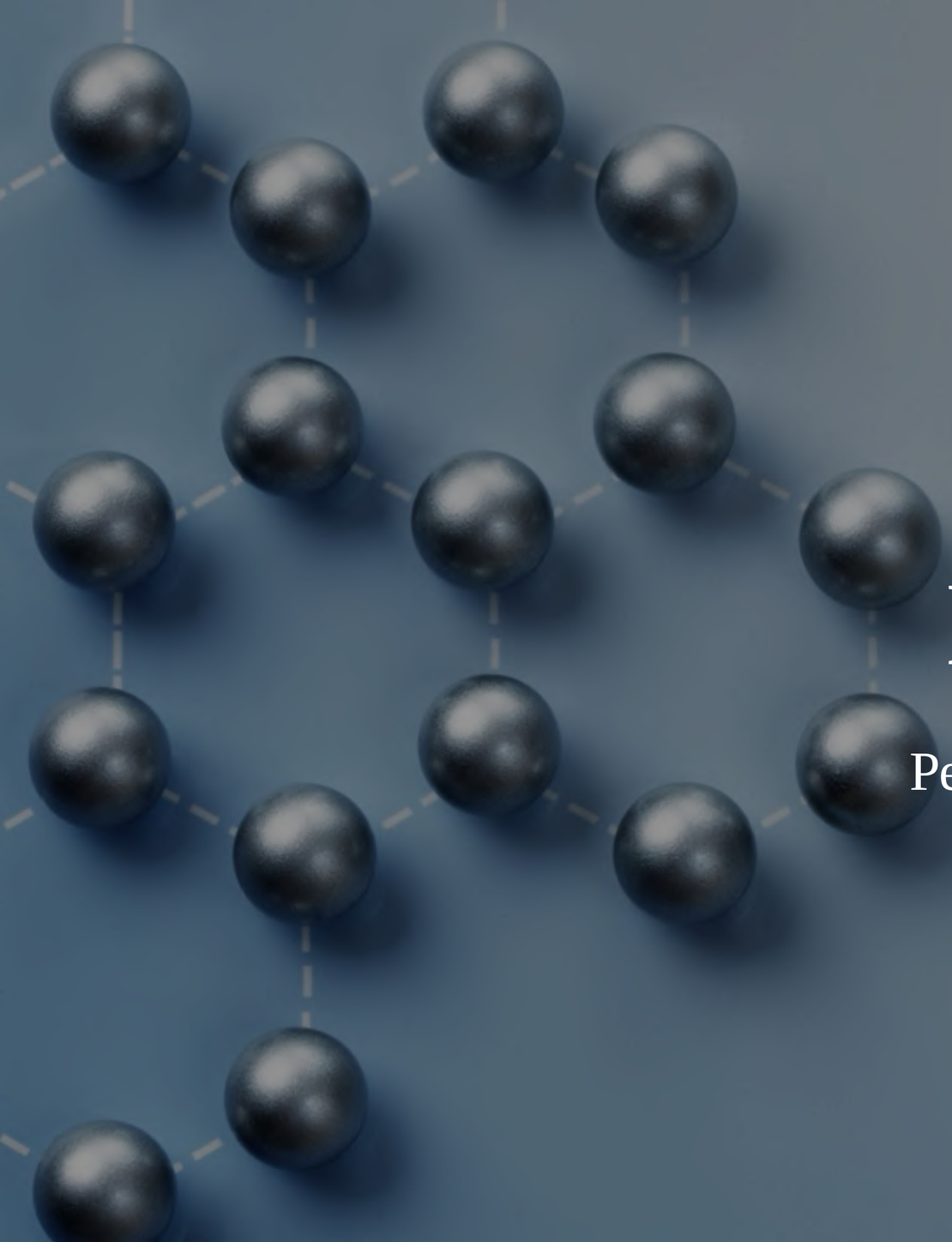
- **O/E-** hyper extended neck, not in respiratory distress, GCS 15/15, fully awake with occasional spasms

- Vital signs: PR= 92bpm, SPO2= 97% on RA, BP= 138/84mmHg, 200mls of dark colored urine in urine bag in 24hours

- **Plan:** continue with Diazepam and Chlorpromazine, I.V fluids, oral cavity care with chlorhexidine + lidocaine gel, antibiotics Metronidazole and Ampiclox

Hospital course

- A week later, great improvement
- Frequency of spasms had significantly reduced, was able to sit up in bed and talk
- Vital signs: BP 117/69mmHg, pulse rate 112 bpm, SPO2 98%
- **Plan:** physiotherapy, continue with Diazepam and Chlorpromazine, transferred to medical ward



Expert

Pearls and pitfalls

Highlights

Goals of management: Tetanus

- Antibiotic therapy
    - Metronidazole
    - Doxycyline
- Control of spasms
    - Benzos
    - Magnesium sulfate
    - Neuromuscular blockers
- Neutralization of unbound toxin
    - Tetanus Human Immunoglobulin
- Wound care – surgical debridement
- Supportive care in ICU

High risk groups

1. Neonates (umbilical stump infections)
   - Usually within 10 days of birth
2. Unvaccinated individuals
3. Recent injuries, wounds or otitis media
4. Child bearing women: Septic abortions
5. IV drug users
6. Surgery: Infected wounds, Community circumcisions, poor sterilization

Presentation

1. Neonatal
   - Poor suck reflex , grimacing and/or irritability
2. Cephalic (usually after head injuries or otitis)
   - Facial nerve palsy
3. Local
   - Early presentation
   - Muscle spasm close to the wound
4. Generalized (late presentation, commonest): Lock jaw, muscle spasms, respiratory failure

ACKNOWLEDGEMENT

Dr. Tracy Walczynski

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Faculty MUST, Seed [illegible]r

Dr. Anna Kaguna

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Moderator