

# EMS-ECHO CASE presentation

24th session

By Dr. Lyavala Musilim  
CUFH-Naguru



On 4th/11/2022 at 11:42am was called by nurse to pediatric resuscitation room to attend to EE an 11 month old male from Naguru Go Down with reduced LOC and DIB.

**Action.**

1. **Danger & response** . Child was in a safe environment however responsive to pain, PEARL
2. **Airway.** Chin lift done, no visible airway obstructions ,neck maintained in neutral position
3. **Breathing.** Tachypneic noisy acidotic breathing 44bpm,no wheeze, equal but reduced airway entry with transmitted breath sounds no crackles.

SPO2 85%. **Intervention** - Neck stabilised in neutral position

-FFO 2L/min via nasal prongs SPO2 maintained at 94% breathing less noisy.

**4.Circulation. Cold extremities, c.refill >3s, pulse 170 bpm tachycardic & thready BP 65/40mmHg, No physical signs of haemorrhage .**

**Intervention.** Child was then put into recovery position, covered with sheets, nurse asked to prepare for IV access, consultant informed.

-Upon asking mother on events, she reported that child had about 4 loose non bloody motions daily for 5 days, vomiting and fever. 1 hr h/o reduced LOC and fast breathing, no cough despite taking coartem, fragyl and Panadol for 2 days without any tests. No known allergies nor chronic illnesses.

-Last meal 3 hours prior at breakfast of milk tea interrupted by vomiting.

# Head to toe exam

-Critically ill , lethargic ,**sunken eyes**, **skin pinch returns after 2 seconds**, mild conjunctival pallor ,no jaundice, cyanosis, clubbing, edema nor lymphadenopathy, well nourished. **T 34.2C hypothermic**, wt 8.5kg, MUAC 14cm, length 71.3cm

**P/A**-normal fullness ,periumbilical tenderness, no palpable organomegalies. Digital RE not done.

**Impression: Hypovolemic shock 2 Severe dehydration 2AWD**

## **Action**

- 2 Iv lines already inserted and blood sample taken off for investigations CBC,BS for mps, RBS, Blood grouping, LFTS & RFTS with serum electrolytes
- Immediately IV R/L 170mls over 30 minutes
- IV D10 43mls given

CHINA-UGANDA FRIENDSHIP HOSPITAL LABORATORY-NAGURU  
P.O BOX 20145, KAMPALA- UGANDA  
HAEMATOLOGY CBC REPORT FROM SYSMEX XNL-550 SN: 19711

Sample No: [REDACTED]  
Patient Name: [REDACTED]  
Birth: [REDACTED] Age: [REDACTED]  
Analysis Date/Time: 04/11/2022 23:08:09  
Print Date/Time: 04/11/2022 23:14  
Doctor: [REDACTED] Sex: Male  
StudyID: [REDACTED]

	Results	Ranges		Results	Ranges
WBC	13.15 $[10^3/uL]$	( 3.00 - 15.00)			
NEUT	8.23 * $[10^3/uL]$	( 1.50 - 7.00)		62.5 * [%]	( 37.0 - 72.0)
LYMPH	3.01 * $[10^3/uL]$	( 1.00 - 3.70)		22.9 [%]	( 20.0 - 50.0)
MONO	1.88 * $[10^3/uL]$	( 0.00 - 0.70)		14.3 [%]	( 0.0 - 14.0)
EO	0.01 $[10^3/uL]$	( 0.00 - 0.40)		0.1 [%]	( 0.0 - 6.0)
BASO	0.02 $[10^3/uL]$	( 0.00 - 0.10)		0.2 [%]	( 0.0 - 1.0)
IG	0.06 * $[10^3/uL]$	( 0.00 - 7.00)		0.5 * [%]	( 0.0 - 72.0)
RBC	6.06 + $[10^6/uL]$	( 2.50 - 5.50)	WDF	WDF-CBC	
HGB	10.1 [g/dL]	( 8.0 - 17.0)			
HCT	36.2 [%]	( 26.0 - 50.0)			
MCV	59.7 - [fL]	( 86.0 - 110.0)			
MCH	16.7 - [pg]	( 26.0 - 38.0)			
MCHC	27.9 - [g/dL]	( 31.0 - 37.0)			
RDW-SD	44.5 [fL]	( 37.0 - 54.0)			
RDW-CV	22.7 + [%]	( 11.0 - 16.0)			
PLT	840 + $[10^3/uL]$	( 50 - 400)			
PDW	9.7 [fL]	( 9.0 - 17.0)			
MPV	8.7 - [fL]	( 9.0 - 13.0)			
P-LCR	16.3 [%]	( 13.0 - 43.0)			
PCT	0.73 + [%]	( 0.17 - 0.35)			
RET	[%]	(0.0000 - 0.9999)			
IRF	[%]	( 0.0 - 100.0)			
LFR	[%]	( 0.0 - 100.0)			
MFR	[%]	( 0.0 - 100.0)			
HFR	[%]	( 0.0 - 100.0)			
RET-He	[pg]	( 0.0 - 99.9)			

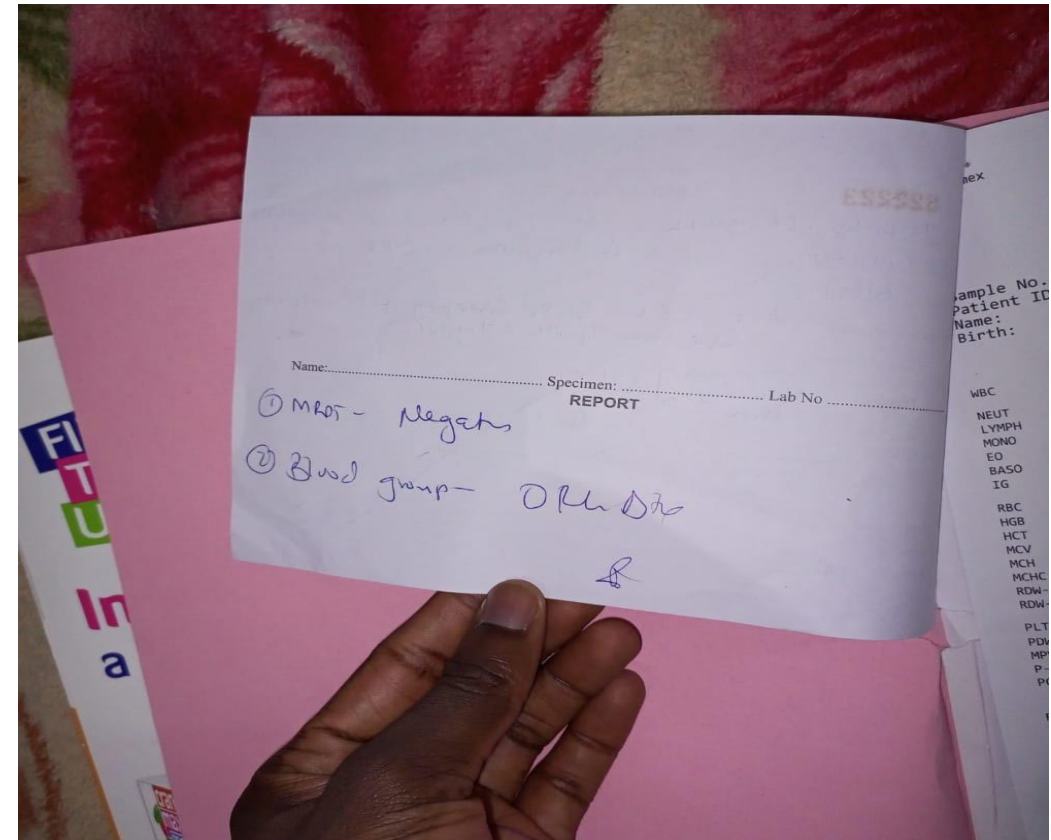
WBC IP Message  
Monocytosis  
Atypical lympho?

RBC IP Message  
Anisocytosis  
Microcytosis  
Hypochromia  
Iron Deficiency?

Analyzed by: [Signature] XN

Reviewed by: [Signature]

25/11/2022



# Rapid results- MRDT negative, RBS 4.3mmol/L

- **Re assessed after 30 minutes** with spontaneous eye opening and weak cry, however still with temp gradient, cap refill <3s and thready pulse at 161bpm, RR at 40 bpm, Chest clear, SPO2 95% FFO, BP 68/46mmHg
- - IV R/L 85mls over 30 minutes then switched to part 2 of plan C 595mls over 5 hrs.
- -Continuous vital monitoring every 30 minutes
- -Fluid balance chart started & child dressed in diaper

## **Reviewed after 2 hrs with lab results:**

- BS no mps seen, Blood Group ORhD+ve
- CBC : W 13,150 **N** 8,230 L 3,010 **M** 1,880 Hb **10.1g/dL** **MCV** 59.7 **MCH** 16.7 **MCHC** 27.9  
PLT 840000
- stool analysis – watery and loose sample, pus and yeast cells, no ova cysts seen

**Note:** RFTS with serum electrolytes not done due to financial constraints

**O/E** Alert and irritable, skin pinch goes back slowly, eyes still sunken, eager to drink , not in obvious resp distress, warm peripheries, diaper soiled with loose stool non bloody 23mls

Chest clear no crackles

**Vitals:** T 37.7C , SPO2 97 %, RR 37 bpm, PR 156 bpm, Bp 79/51 mmHg

Urine output -0.8mls/kg/hr

### **Action**

- Transferred to ward
- Completed plan C from ward and Continuous monitoring
  - Iv antibiotics Ceftriaxone and metronidazole started
  - Tabs Zinc sulphate 20mg o.d 2 weeks
  - Tabs Paracetamol 125 mg tds
  - Frequent breastfeeding encouraged
  - Monitor vitals and fluid balance on ward



# Fluid balance chart

Fluids to be Given		FLUID BALANCE CHART									
ORAL: Type of Fluid		Name: [REDACTED] Ward: <u>P&amp;D</u> Bed: _____									
Amount.....ML/hr		Date: <u>4<sup>th</sup>/NOV/22</u> 20..... as at (6: a.m) I.P. No: <u>NOV 647</u>									
OTHER: Route.....		FLUID INTAKE						FLUID OUTPUT			
Type of Fluid.....		Oral		Intravenous		Other	Urine	Vomit of Gastric	Feaces Tube	Other	
Amount .....ML/hr		Type of fluid	ml.	Type of fluid	ml.	ml.	ml.	ml.	ml.	ml.	
8 a.m.											
9 a.m.											
10a.m.											
11a.m.											
12noon.	<u>R.L</u>	<u>170ml</u>		<u>D10</u>	<u>43ml</u>						
1p.m.	<u>R.L</u>	<u>85ml</u>									
2p.m.	<u>R.L</u>	<u>595ml</u>							<u>23ml</u>		
3p.m.											
4p.m.											
5p.m.							<u>14ml</u>				
6p.m.									<u>15ml</u>		
7p.m.			<u>ORS</u>	<u>688ml</u>			<u>21ml</u>				
8p.m.											
9p.m.											
10p.m.									<u>2ml</u>		
11p.m.											
12mdn.											
1a.m.			<u>ORS</u>	<u>85ml</u>			<u>48ml</u>		<u>8ml</u>		
2a.m.											
3a.m.											



# ISSUES

- Severe dehydration with shock
- Febrile illness
- Reduced levels of consciousness
- Hypotension
- hypoxia
- Mild microcytic hypochromic anaemia
- ?Electrolyte imbalance
- Monitoring
- Investigation

THANK YOU