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# EMS ECHO CASE PRESENTATION

By

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# Clinical presentation

PC – Fevers\*3/7

HPC – 24/F Seronegative, with a Hx Dx of Acute Myeloid Leukemia, Day 8 of Rx  
S/P #1 of Cytarabine(5) + Daunorubicin (2)

Presented with a high grade fever initially low grade associated with constitutional symptoms



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# Primary Survey (Emergency Assessment and Management)

A	Airway	Patent	N/A
B	Breathing	Not in distress, RR=15c/min SPO2=98% (R/A)	N/A
C	Circulation	Severe pallor, Palatal hemorrhages, Tachycardic at 124bpm, Hypotensive with SBP of 86mmHg and DBP of 44mmHg	Grouping and Cross matching Tranexamic acid PLT transfusion Fluid therapy Blood transfusion

# Primary Survey (Emergency Assessment and Management)

D	Disability	Alert GCS of 15/15 No FND	N/A
E	Exposure	Febrile, T of 39.2oC	i/v PCM 1g stat

# Secondary Survey (Head-to-toe examination)

Head and Neck – Palatal hemorrhages

Chest – N

Upper Limb – N



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# Secondary Survey (Head-to-toe examination)

Abdomen - N

Genitalia - N

Lower limbs - N



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# SAMPLE History

S	Sign & Symptom		
A	Allergies	NAD	
M	Medication	Cytarabine (5) Daunorubicin (2)	Day 8 of the cycle

# SAMPLE History

P	<b>Past Medical History</b>  <b>Past Surgical History</b>  <b>FSH</b>	AML FAB M4	
L	Last meal/LNMP	Not documented	
E	Events	None	



# Problem List

1. Fevers
2. Tachycardia
3. Hypotension
4. Palatal hemorrhages
5. Hx of Anticancer Rx

# Investigations

TEST  
CREJ2  
UREAL  
K  
Na  
Cl

RATIO	RESULT	UNIT
	51 L	umol/L
	5.6	mmol/L
	3.77	mmol/L
	142	mmol/L
	107.3	mmol/L
	30.0 L	g/L

EXPECTI  
( 63  
( 2  
( 3  
( 1  
(  
(  
(

Test : CBC+DIFF

Parameter	Result	Flag	Reference	SI units
WBC:	0.34	Low	(2.80 - 8.20)	$\times 10^9/\mu\text{L}$
NEUT#:	0.04	Low	(1.10 - 4.40)	$\times 10^9/\mu\text{L}$
LYMPH#:	0.3	Low	(1.30 - 3.70)	$\times 10^9/\mu\text{L}$
MONO#:	0.0	Low	(0.20 - 0.60)	$\times 10^9/\mu\text{L}$
EO#:	0.0	Low	(0.04 - 1.40)	$\times 10^9/\mu\text{L}$
BASO#:	0.0	Low	(0.01 - 0.07)	$\times 10^9/\mu\text{L}$
IG#:	0.01	Low	(1.80 - 8.00)	
NEUT%:	11.8	Low	(23.80 - 61.10)	%
LYMPH%:	88.2	High	(26.50 - 62.00)	%
MONO%:	0.0	Low	(4.40 - 11.40)	%
EO%:	0.0	Low	(0.75 - 22.60)	%
BASO%:	0.0	Low	(0.30 - 1.30)	%
IG%:	2.9	Normal	(1.80 - 8.00)	%
RBC:	2.57	Low	(3.30 - 5.30)	$\times 10^{12}/\mu\text{L}$
HGB:	7.3	Low	(9.80 - 16.20)	g/dL
HCT:	21.3	Low	(28.30 - 46.80)	%
MCV:	82.9	Normal	(74.00 - 94.50)	fL
MCH:	28.4	Normal	(24.80 - 32.70)	pg
MCHC:	34.3	Normal	(33.00 - 35.50)	g/dL
RDW-SD:	41.1	Normal	(37.00 - 54.00)	fL
RDW-CV:	13.7	Low	(11.00 - 17.30)	%
NRBC#:	0.0	Low	(1.80 - 8.00)	%
NRBC%:	0.0	Low	(1.80 - 8.00)	%
PLT:	1.0	Low	(138.00 - 457.00)	$\times 10^9/\mu\text{L}$



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# Management

1. SC Pegex 6mg stat
2. PLT 1unit
3. BLT 1unit
4. Antibiotics
  1. PISA 4.5g \*8\* 2/7
  2. Daptomycin 500mg OD for 2/7
  3. CAF 1g \*8/Gentamicin 160mg OD for 3/7

# Management

1. Antipyretics
  1. i/v PCM 1g \*8 for 2days
  2. PO PCM 1g \*8 for 3days
2. Fluid therapy
3. Tripple therapy
  1. Acyclovir 400mg \*8
  2. Fluconazole 200mg OD
4. Tranexamic acid: 1/v 1g stat, then PO 500mg \*12
5. 4hourly monitoring of the Axillary temperature



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# Follow-up

Results	Ranges
WBC 0.67 - [10 <sup>3</sup> /uL]	( 3.00 - 15.00)
NEUT 0.10 * [10 <sup>3</sup> /uL]	( 1.50 - 7.00)
LYMPH 0.52 * [10 <sup>3</sup> /uL]	( 1.00 - 3.70)
MONO 0.03 * [10 <sup>3</sup> /uL]	( 0.00 - 0.70)
EO 0.01 * [10 <sup>3</sup> /uL]	( 0.00 - 0.40)
BASO 0.01 * [10 <sup>3</sup> /uL]	( 0.00 - 0.10)
IG 0.06 * [10 <sup>3</sup> /uL]	( 0.00 - 7.00)
RBC 2.95 [10 <sup>6</sup> /uL]	( 2.50 - 5.50)
HGB 8.5 [g/dL]	( 8.0 - 17.0)
HCT 25.7 - [%]	( 26.0 - 50.0)
MCV 87.1 [fL]	( 86.0 - 110.0)
MCH 28.8 [pg]	( 26.0 - 38.0)
MCHC 33.1 [g/dL]	( 31.0 - 37.0)
RDW-SD 49.5 [fL]	( 37.0 - 54.0)
RDW-CV 15.7 [%]	( 11.0 - 16.0)
PLT 19 * [10 <sup>3</sup> /uL]	( 100 - 400)
PDW 17.4 + [fL]	( 9.0 - 17.0)
MPV 12.9 [fL]	( 9.0 - 13.0)
P-LCR 49.5 + [%]	( 13.0 - 43.0)
PCT 0.02 - [%]	( 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  
Neutropenia  
Leukocytopenia  
Leukocytopenia  
Blasts/Abn Lympho?  
Atypical Lympho?

RBC IP Message

Test : CBC+DIFF

Parameter
WBC:
NEUT#:
LYMPH#:
MONO#:
EO#:
BASO#:
IG#:
NEUT%:
LYMPH%:
MONO%:
EO%:
BASO%:
IG%:
RBC:
HGB:
HCT:
MCV:
MCH:
MCHC:
RDW-SD:
RDW-CV:
NRBC#:
NRBC%:
PLT:

Comment (s) : Full haemat  
Equipment/Technique used  
Analyzed By: IBRAHI  
Reviewed By: WYCLII

Rest	Results	Range
0.39 WBC	0.86 - [10 <sup>3</sup> /uL]	( 3.20
0.12 NEUT	0.18 * [10 <sup>3</sup> /uL]	( 1.10
0.26 LYMPH	0.60 * [10 <sup>3</sup> /uL]	( 1.30
0.01 MONO	0.07 * [10 <sup>3</sup> /uL]	( 0.20
0.0 EO	0.00 * [10 <sup>3</sup> /uL]	( 0.04
0.0 BASO	0.01 * [10 <sup>3</sup> /uL]	( 0.01
0.0 IG	0.03 * [10 <sup>3</sup> /uL]	( 0.00
0.01 RBC	3.71 [10 <sup>6</sup> /uL]	( 3.30
30.7 HGB	10.7 [g/dL]	( 9.8
66.7 HCT	32.1 [%]	( 28.3
2.6 MCV	86.5 [fL]	( 74.0
0.0 MCH	28.8 [pg]	( 24.8
0.0 MCHC	33.3 [g/dL]	( 33.0
2.6 RDW-SD	49.3 [fL]	( 37.0
2.3 RDW-CV	16.3 [%]	( 11.0
6.7 PLT	23 - [10 <sup>3</sup> /uL]	( 138
19.1 PDW	18.8 + [fL]	( 9.0
84 MPV	12.4 + [fL]	( 6.0
28 P-LCR	45.7 + [%]	( 13.0
34 PCT	0.03 - [%]	( 0.17
RET [%]		( 0.0000
IRF [%]		( 0.0
LFR [%]		( 0.0
MFR [%]		( 0.0
HFR [%]		( 0.0
RET-He [pg]		( 0.0

WBC IP Message  
Neutropenia  
Leukocytopenia  
Leukocytopenia  
Blasts/Abn Lympho?  
Atypical Lympho?

Results	Ref. Ranges
WBC 9.84 + [10 <sup>3</sup> /uL]	( 2.80 - 7.70)
NEUT 7.61 * [10 <sup>3</sup> /uL]	( 1.50 - 7.00)
LYMPH 0.87 - [10 <sup>3</sup> /uL]	( 1.00 - 3.70)
MONO 1.30 + [10 <sup>3</sup> /uL]	( 0.00 - 0.70)
EO 0.00 * [10 <sup>3</sup> /uL]	( 0.00 - 0.40)
BASO 0.06 [10 <sup>3</sup> /uL]	( 0.00 - 0.10)
IG 2.47 * [10 <sup>3</sup> /uL]	( 0.00 - 7.00)
RBC 3.58 [10 <sup>6</sup> /uL]	( 2.50 - 5.50)
HGB 9.9 [g/dL]	( 8.0 - 17.0)
HCT 29.0 [%]	( 26.0 - 50.0)
MCV 81.0 - [fL]	( 86.0 - 110.0)
MCH 27.7 [pg]	( 26.0 - 38.0)
MCHC 34.1 [g/dL]	( 31.0 - 37.0)
RDW-SD 49.8 + [fL]	( 37.0 - 54.0)
RDW-CV 17.1 [%]	( 11.0 - 16.0)
NRBC 0.15 [10 <sup>3</sup> /uL]	
NRBC% 1.5 [%]	
PLT 162 * [10 <sup>3</sup> /uL]	( 150 - 358)
PDW 18.6 * [fL]	( 9.0 - 17.0)
MPV 11.8 * [fL]	( 9.0 - 13.0)
P-LCR 40.7 * [%]	( 13.0 - 43.0)
PCT 0.19 * [%]	( 0.17 - 0.35)

RBC

WBC IP Message  
Monocytosis  
IG Present  
Left Shift?

PLT

RBC IP Message  
Anemia

WPC

SSC

WNR

SSC

WDF

SSC

PLT IP Message  
PLT Abn Distribution  
Giant Platelet?

# Disposition Plan

1. Got better on Rx
2. Achieved Remission Induction
3. Currently on Consolidation



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Thank you