

# Query – Why is this mans INR going off so fast !! ??

Haematology	28-11-2019 06:48	28-11-2019 03:01	27-11-2019 15:22	27-11-2019 03:08	26-11-2019 18:12	26-11-2019 03:45	25-11-2019 00:55	24-11-2019 22:03	24-11-2019 19:34
<b>FBE</b>									
<input type="checkbox"/> Hb		85	97	106	100	106	107		115
<input type="checkbox"/> WBC		31.82	30.81	33.78	18.70	14.71	14.50		17.13
<input type="checkbox"/> Platelets		102	114	140	117	103	83		90
<input type="checkbox"/> Hct		0.28	0.32	0.34	0.32	0.33	0.33		0.35
<input type="checkbox"/> MCV		113	115	112	* 111	105	104		106
<input type="checkbox"/> MCH		34.2	34.8	34.4	34.4	34.2	33.8		34.7
<input type="checkbox"/> MCHC		302	304	308	311	325	326		327
<input type="checkbox"/> RBC		2.49	2.80	3.08	2.92	3.10	3.17		3.33
<input type="checkbox"/> RDW		17.3	17.3	17.1	16.6	15.4	14.7		14.3
<input type="checkbox"/> Neutrophils	24.46		26.39	29.04	16.95	12.78	12.38	15.07	
<input type="checkbox"/> Lymphocytes	6.10		3.95	3.50	1.12	1.37	1.13	0.96	
<input type="checkbox"/> Monocytes	0.78		0.70	1.11	0.52	0.47	0.97	1.05	
<input type="checkbox"/> Eosinophils	0.31		0.29	0.03	0.01	0.08	0.01	0.00	
<input type="checkbox"/> Basophils	0.18		0.14	0.09	0.11	0.02	0.01	0.05	
Morphology	* Date\Time Cor	* (c) Comment		* Comment				* Date\Time Cor	* (c) Comment
<b>Miscellaneous Haem</b>									
<input type="checkbox"/> Reticulocytes		56.0							
<input type="checkbox"/> Reticulocytes %		2.28							
<b>Coagulation</b>									
Anticoagulant?	None	None	None	None	None	None, None	None, None		Not Specified
<input checked="" type="checkbox"/> INR	6.6	Insufficient	* (c) 4.5	2.4	* 2.2	1.5	1.3		1.2
<input type="checkbox"/> PT	78.7	Insufficient	55.0	30.8	27.3	19.1	17.0		15.9
<input type="checkbox"/> APTT	* 65.8	* Insufficient	* 55.8	* 44.4	* 35.7	* 34.9	* 29.0		* 28.7
<input type="checkbox"/> Fibrinogen Level	3.8	Insufficient	4.3	4.6	4.2				3.8
<input type="checkbox"/> TCT	19.1	(c) Insufficient	18.7	18.8	18.3				17.7
Coag Phone Comment	* Phoned Comm	* Phoned Comm	* Phoned Comm						
<input type="checkbox"/> D-Dimer	* 4.75	* Insufficient	* 3.89						
<b>Haemolysis</b>									
<input type="checkbox"/> Haptoglobin		0.10							
<input type="checkbox"/> Plasma Free Haemoglobin		0.13							

### Inpatient Progress

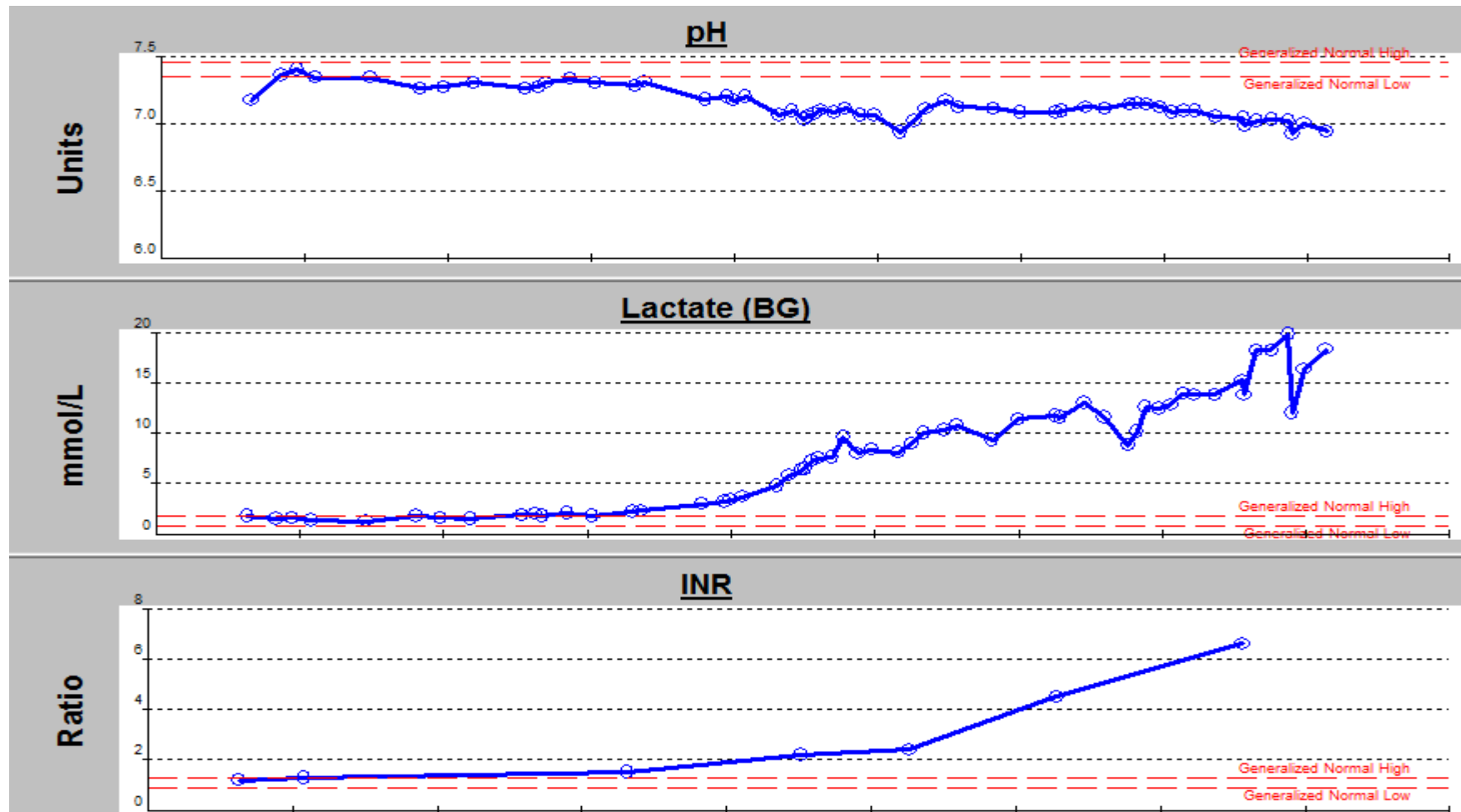
Day 3 multi-trauma complicated by multiorgan failure

# Anuric renal failure

- Continues on CRRT
- Lactate persistently elevated

# Acute fulminant hepatic failure

- INR 4.5, started on Vit K
- On NAC infusion and BD Albumin
- US liver showed gas either in bile duct or portal venous system, but repeat CT-AP showed no gas, no biliary obstruction
- Lactate 18



Factor <sup>a</sup>	Synonym	Biologic Half-life (h)	Blood Product Source
I	Fibrinogen	100–150	Cryoprecipitate (200–300 mg/bag)
II	Prothrombin	50–80	FFP, PCC
V	Proaccelerin	12–36	FFP
VII	Proconvertin	4–6	Recombinant VIIa, FFP, PCC
VIII	Antihemophilic factor	12–15	FFP, factor concentrates, cryoprecipitate
IX	Christmas factor	18–30	FFP, PCC, factor concentrates
X	Stuart-Power factor	25–60	FFP, PCC
XI	Plasma thromboplastin antecedent	40–80	FFP
XII	Hageman factor	50–70	Not associated with bleeding diathesis
XIII	Fibrin-stabilizing factor	150	FFP, cryoprecipitate, factor concentrate
VWF	von Willebrand factor	8–12	FFP, cryoprecipitate, factor concentrate

Factor VII	Acute Liver Failure
Time 0	100 %
05 hrs	50 %
10 hrs	25 %
15 hrs	13 %
20 hrs	6 %
25 hrs	3 %
30 hrs	1.5 %
35 hrs	0.8 %
40 hrs	0.4 %
45 hrs	0.2 %

Assuming 100 % FVIII at time zero we would expect to see the INR prolong around 10 hours after acute liver failure and expect it to be markedly prolonged within 24 hours.

Michael has progressive liver failure - almost certainly acute on chronic however largely behaving like ALF  
 Best unifying diagnosis is decompensated chronic liver failure secondary to sepsis from pneumonia  
 Clinical examination and imaging have failed to find any alternative diagnosis (e.g. mesenteric ischaemia) or alternative source of ongoing infection (e.g. sinusitis, cholangitis, cellulitis)