49th Myanmar Health Research Congress
Symposium on
Lessons Learnt from COVID-19 Pandemic
Clinical Perspective

Prof. Sabai Phyu

Specialist hospital Waibargi

DMR-18.1.2021

Contents

- Present situation of hospitalized cases
- Clinical case scenario
  - Mortality cases
  - Cases with interesting complications
- In Future
- Take home message

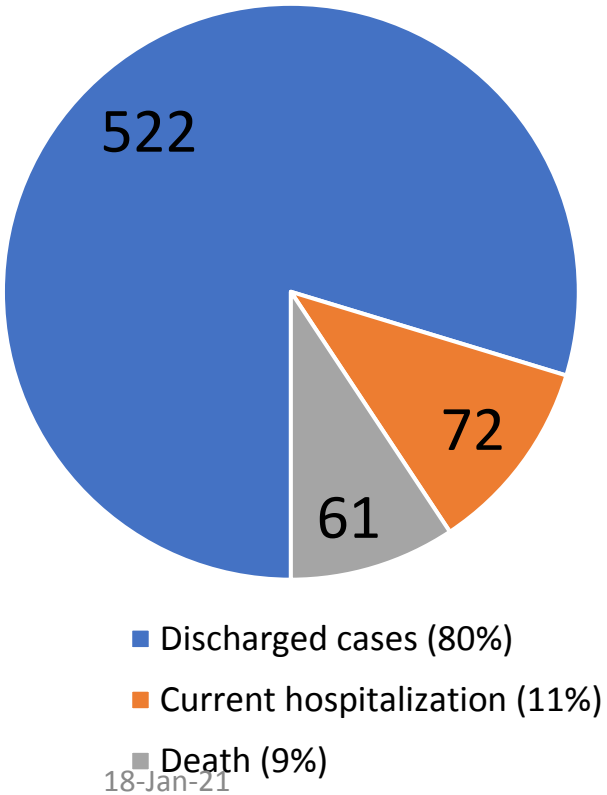
Phases

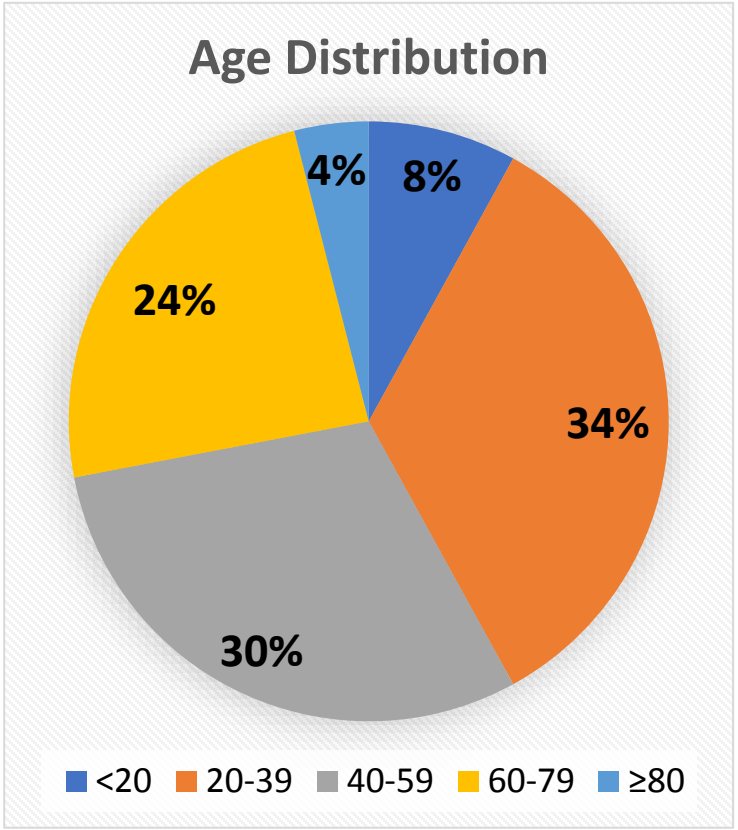
First phase duration is 23th March to August 15th

Second phase started from 16th August up to 30th December

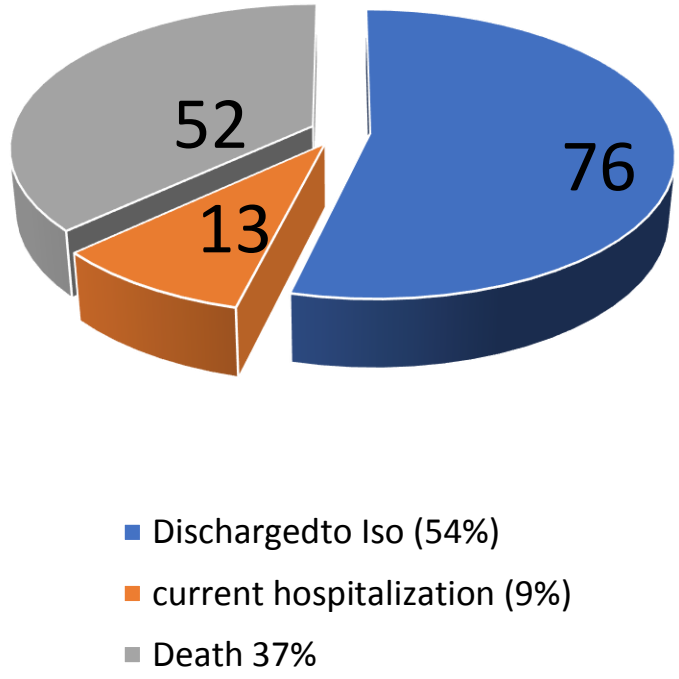
Waibargi status on COVID-19 (March 23rd to 30th Dec 2020)

Outcome of Isolation ward total cases (n=689)





Outcome of ICU cases (n=141)



Admission cases

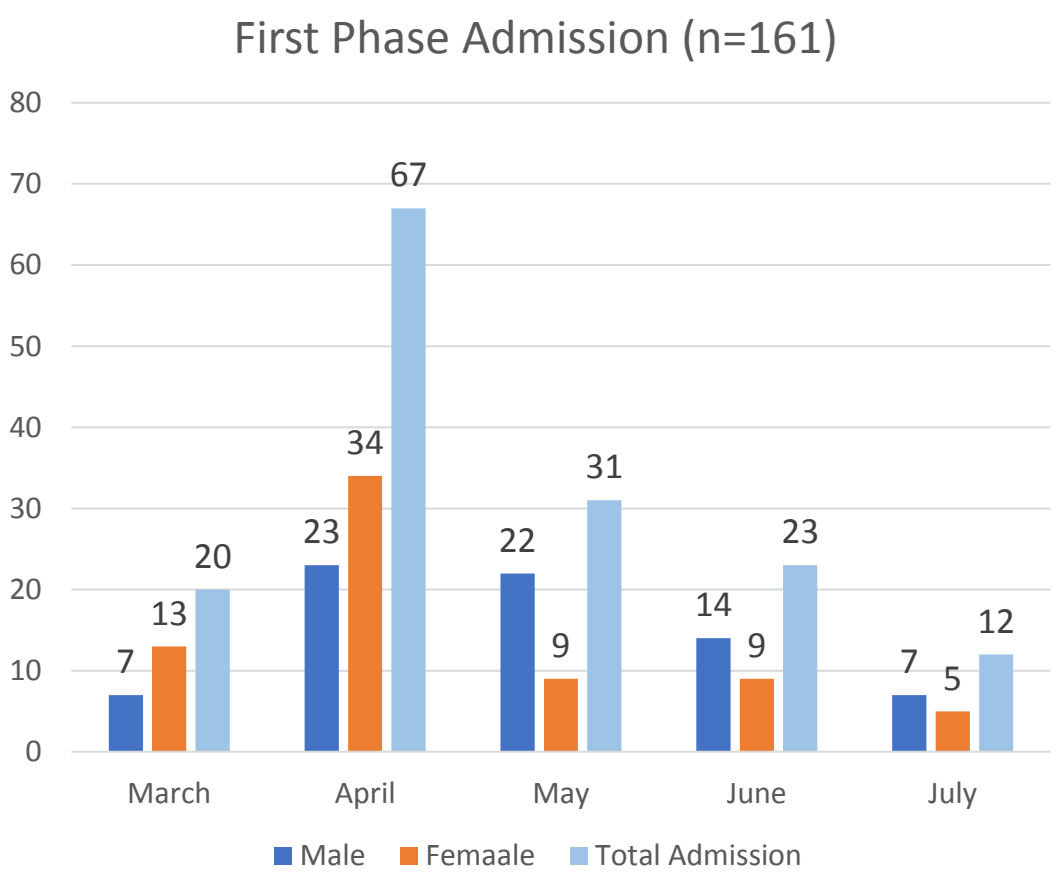
(1st phase)

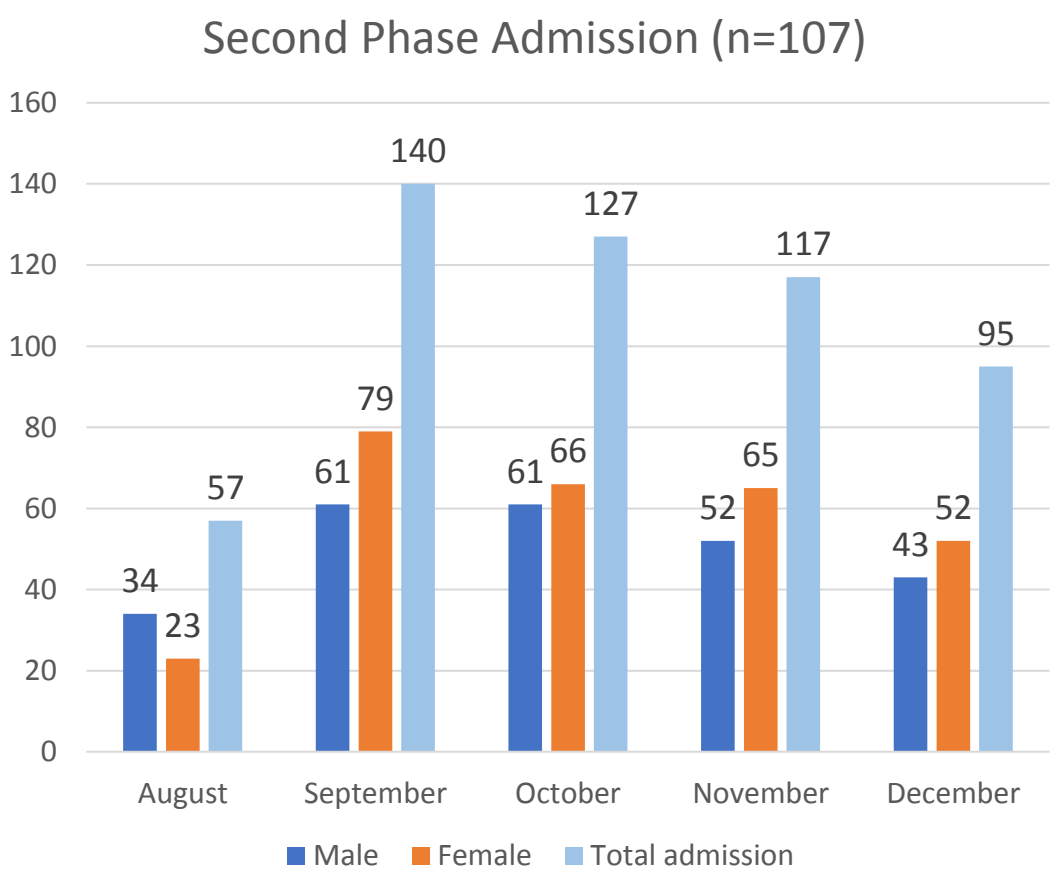
Month	Male	Female	Total
March	7	13	20
April	23	34	67
May	22	9	31
June	14	9	23
July	7	5	12
Total	73	70	153

(2nd phase)

Month	Male	Female	Total
August	34	23	57
September	61	79	140
October	61	66	127
November	52	65	117
December	43	52	95
Total	251	285	536

Admission cases





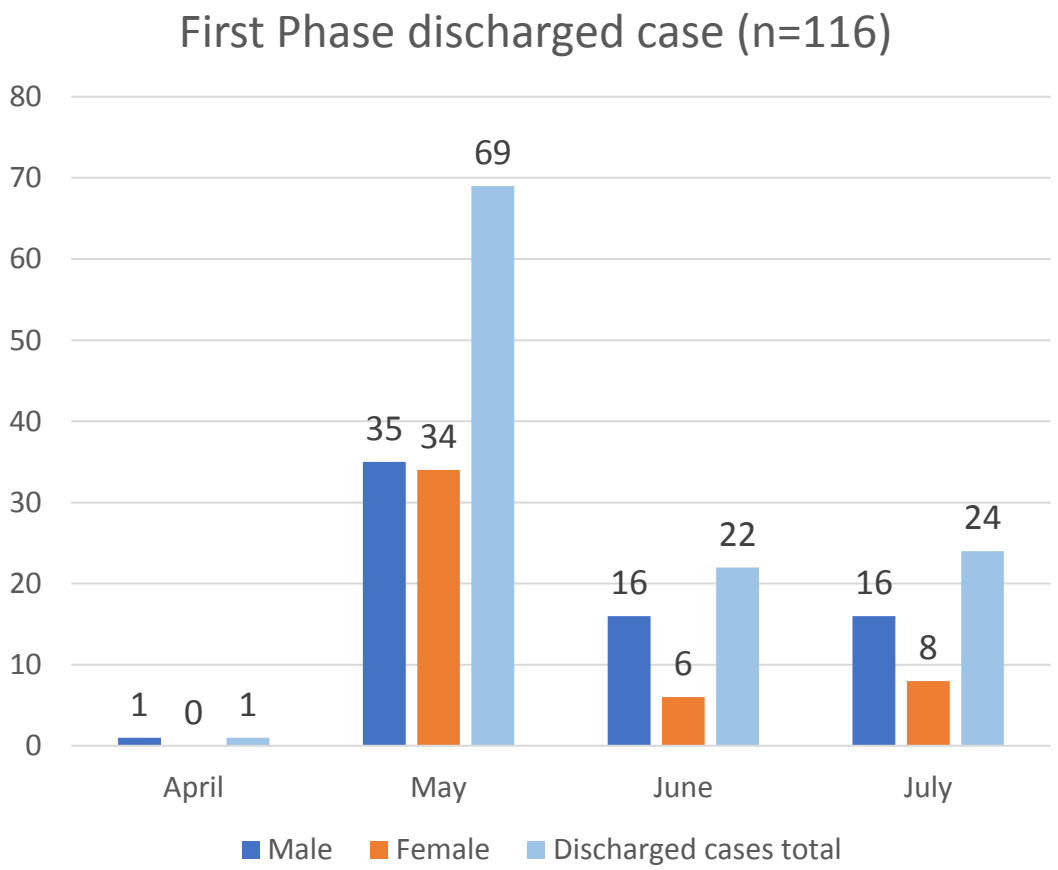
Discharged cases (1st phase)

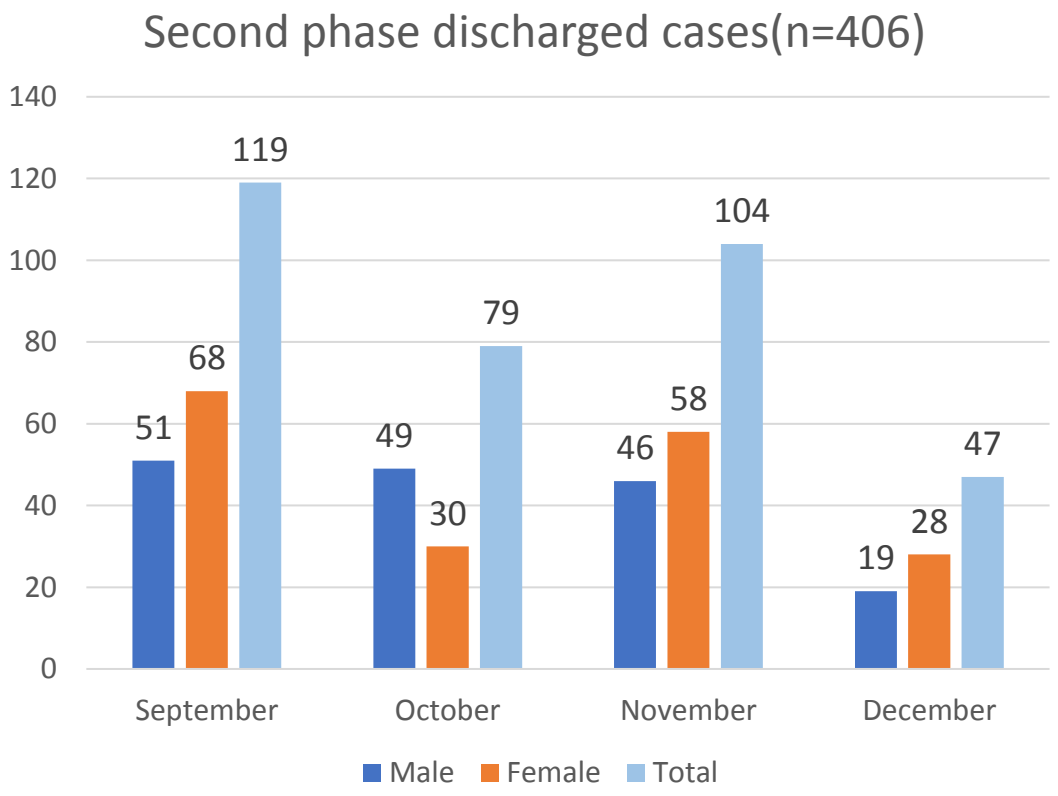
Month	Male	Female	Total
April	1	0	1
May	35	34	69
June	16	6	22
July	16	8	24
Total	68	48	116

(2nd phase)

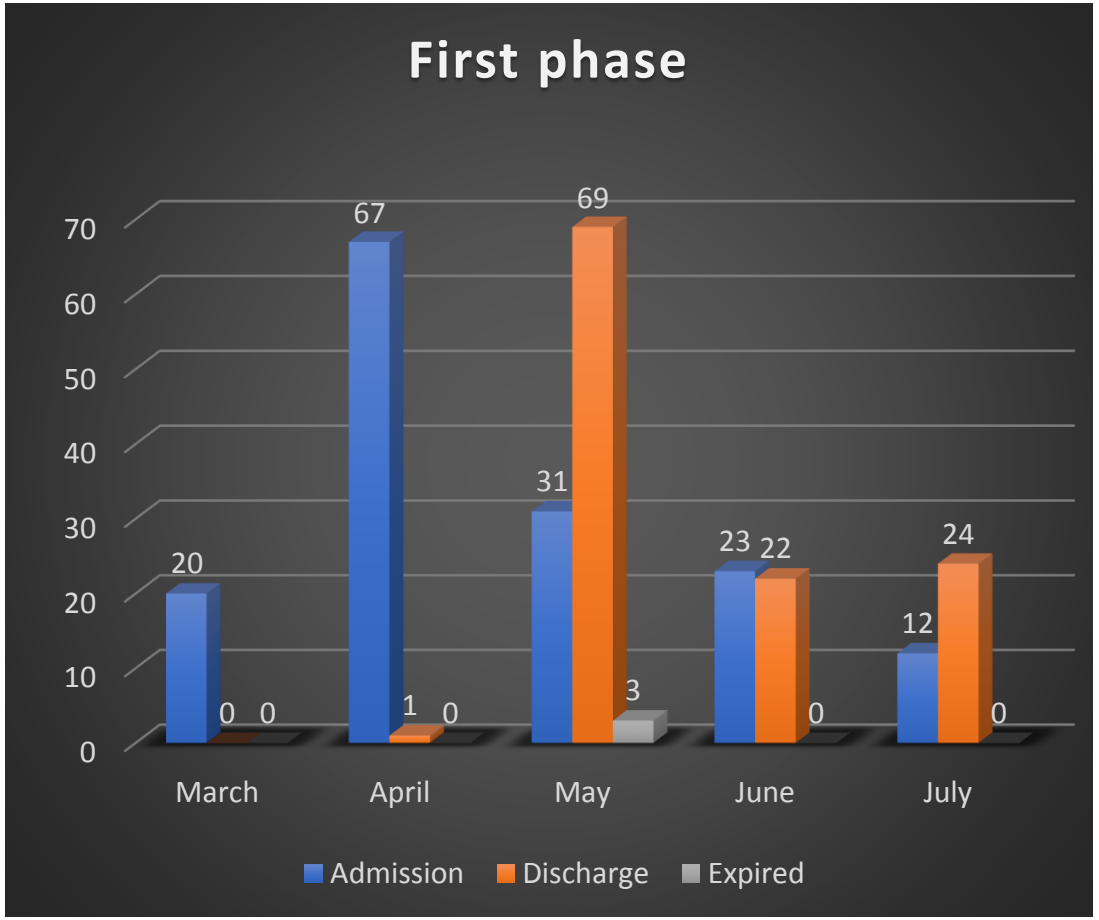
Month	Male	Female	Total
August	34	23	57
September	51	68	119
October	49	30	76
November	46	58	104
December	19	28	47
Total	199	207	406

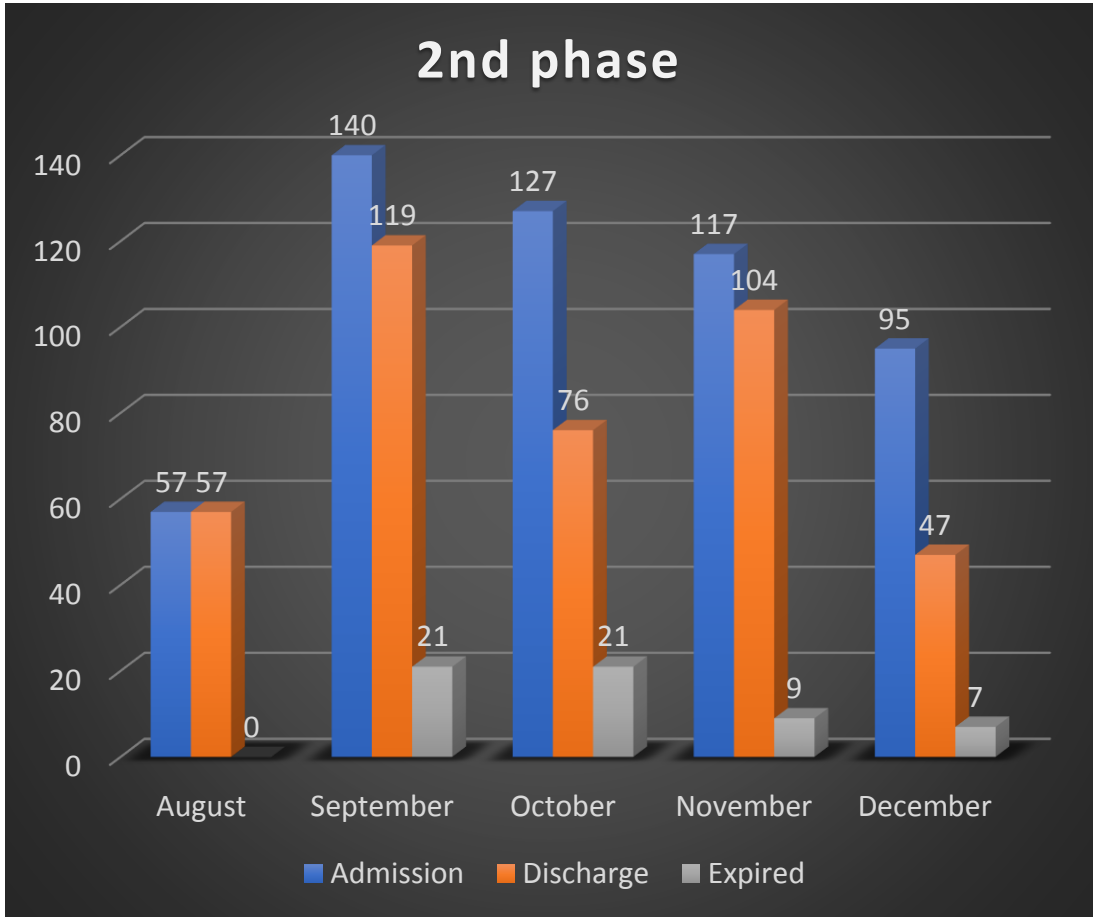
Discharged cases



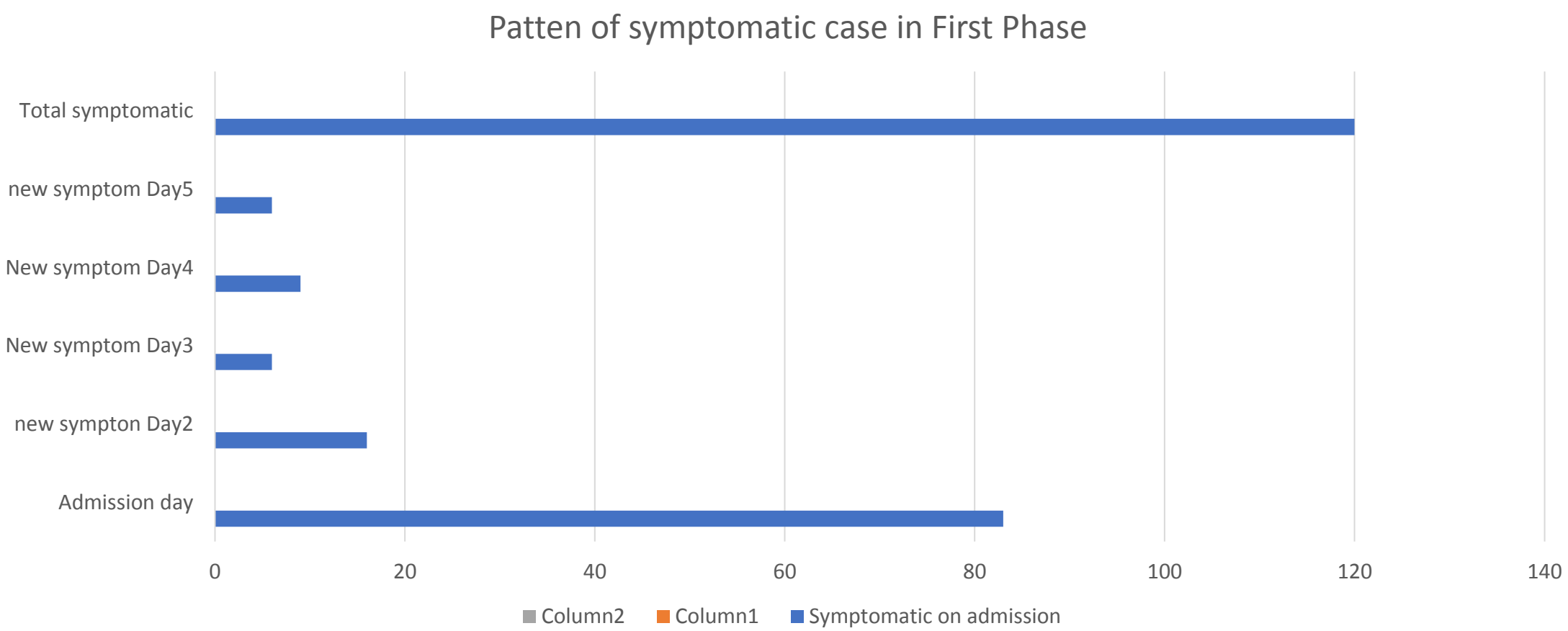


Bar Graph for Admission, D/C and Expired cases in first and second phase





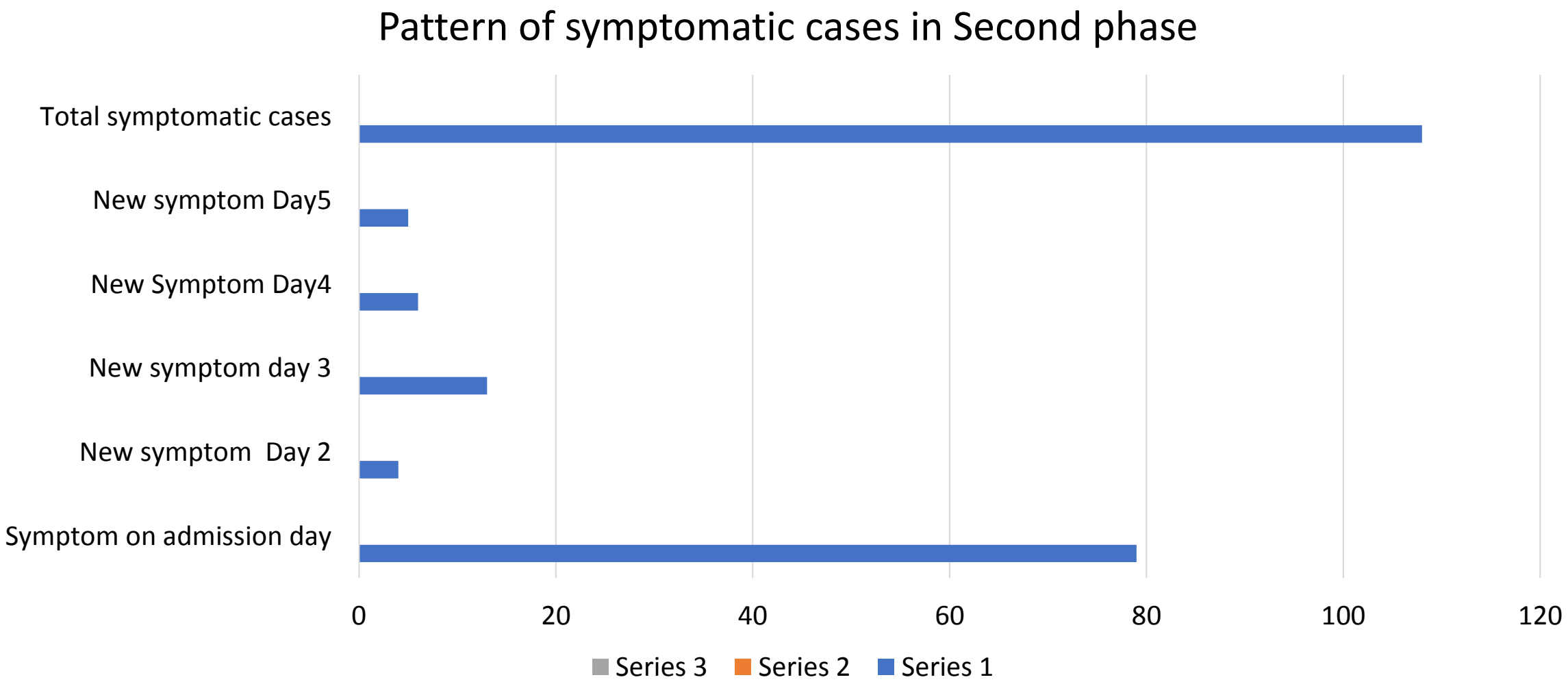
First Phase Clinical presentations



First Phase Clinical presentations (Asymptomatic on admission 28.4 %)

Time	Symptom	Fever	Sorethroat	Cough	Dysponea	dirrhoea	Myalgia	Sneezing	lethergy	Nausea /vomiting	Anosmia
Admission day	83	46	21	45	11	13	12	5	1	4	10
Day 2	16	1	3	3	1	6	1	1	1	-	-
Day 3	6	1	-	-	2	3	-	-	-	-	-
Day 4	9	1	1	2	1	3	-	-	-	-	-
Day 5	6	-	-	-	1	2	-	-	-	-	1
Total	120	49	25	50	16	27	13	6	2	4	11

Second Phase Clinical presentations



Second Phase Clinical presentations(Asymptomatic on admission 14 %)

Time	Symptomatic case	Fever	Sore throat	Cough	Dyspnea	dirrhoea	Myalgia	Sneezing	lethergy	Nausea/ vomiting	Anosmia	Other
Admission day	462	328	39	267	187	77	82	25	1	19	133	188
Day 2 (New Symptom)	40	9	1	10	5	4	3	3	0	0	0	5
Day 3(New Symptom)	20	10	0	3	7	0	0	0	0	0	2	0
Day 4(New Symptom)	9	5	0	0	3	0	0	0	0	1	0	0
Day 5(New)	5	3	0	0	2	0	0	0	0	0	0	0
Total	536	355	40	280	204	81	85	28	1	20	133	193

Comobidities (1st phase)

	Diseases	Number of cases
1	Hypertension	27
2	Diabetes	23
3	Ischemic heart disease	2
4	Pulmonary TB	5 (Active 2 . Old 3)
5	ESRD	1
6	HIV	1
7	Transplants patient	2
8	Old Stroke	1
9 10 11	Maliganancy HBV Hyperthyroid hypoparathyroid	3 3 1

(2nd phase)

	Diseases	Number of cases
1	Hypertension Only	114
2	Diabetes Only	68
3	Ischemic Heart disease	24
4	Cancer	5
5	HT, DM, IHD	11
6	HT, DM	62
7	Pulmonary TB	26
8	ESRD	21
9	HIV	17
10	Transplants patient	1
11	Old Stroke	12
12 13	HBV Asthma	2 5
14	Others	49

Complications of COVID (1st phase)

No	Complication condition	Number of cases
1	Pneumonia	46 (Residual impairment 6)
2	Coagulopathy	38
3	Pulmonary Embolism	1
4	Nephropathy	1
5	Sepsis	4
6	Cytokine storm	6
7 8	Carditis AMI	5 1

(2nd phase)

No	Complication condition	Number of cases
1	Pneumonia /ARDS	67/27
2	Coagulopathy	94
3	Pulmonary Embolism	0
4	ESRD	33
5	Sepsis	60
6	Cytokine storm	10
7 8	Carditis AMI	10 4

Treatments (1st phase)

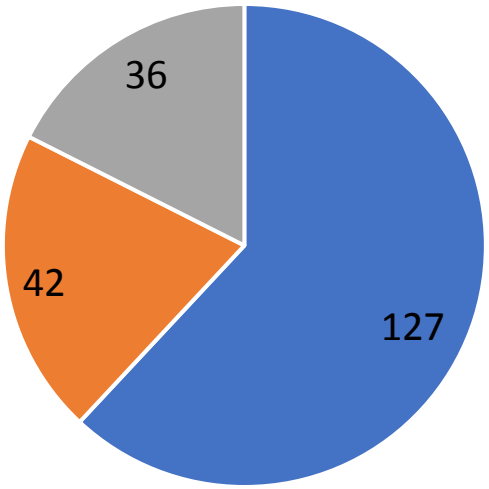
No	Treatment	Number of patients
1	Hydroxy chloroquine and Azithromycin	108
2	Antibiotic	74
3	Enoxaprine	38
4	Asprin	42
5	Ivermectin	41
6	Convalescent plasma	8

(2nd phase)

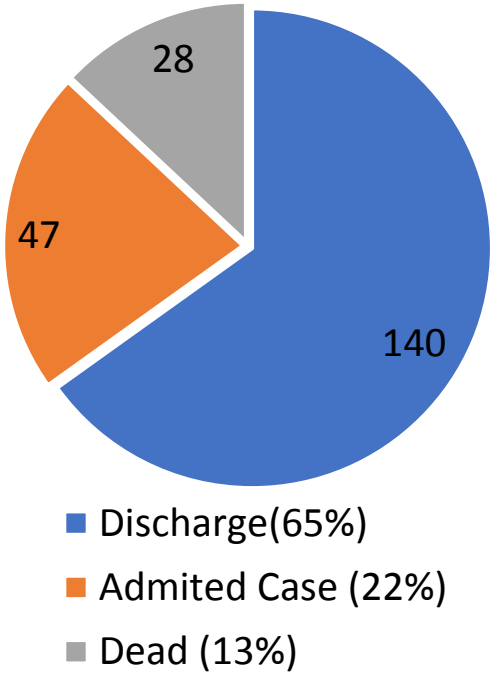
No	Treatment	Number of patients
1	Corticosteroids	247
2	Antibiotic	372
3	Remdesivir	215
4	Anticoagulant	250
5	Avigan	79
6	Convalescent plasma	197

Outcome of Con Plasma, Remdesivir and both

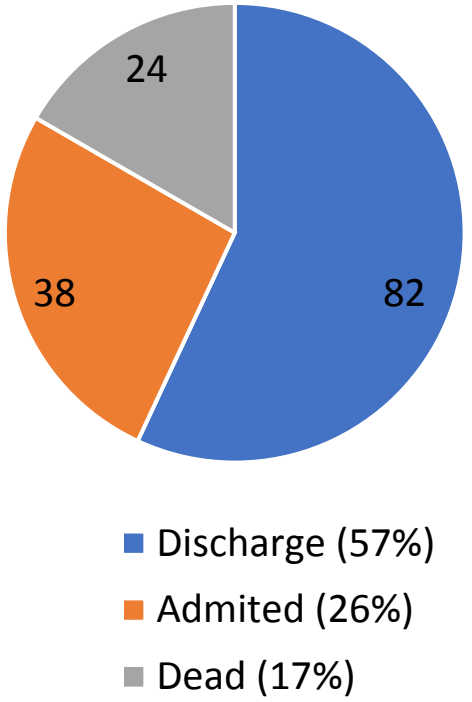
Convalenscent Plasma (n=205)



Remdesivir (n=215)



Both Con plasma & Remdesivir (n=144)



Total Lymphocyte count (1st phase)

Total Lymphocyte count	Male	Female	Total
Less than 1	12	7	19
TLC 1-1.5	10	2	12
TLC 1.5-2	12	15	27
Above 2	47	26	73

(2nd phase)

Total Lymphocyte count	Male	Female	Total
Less than 1	73	56	129
TLC 1-1.5	21	20	41
TLC 1.5-2	85	88	173
Above 2	74	119	193

D-dimer level on admission

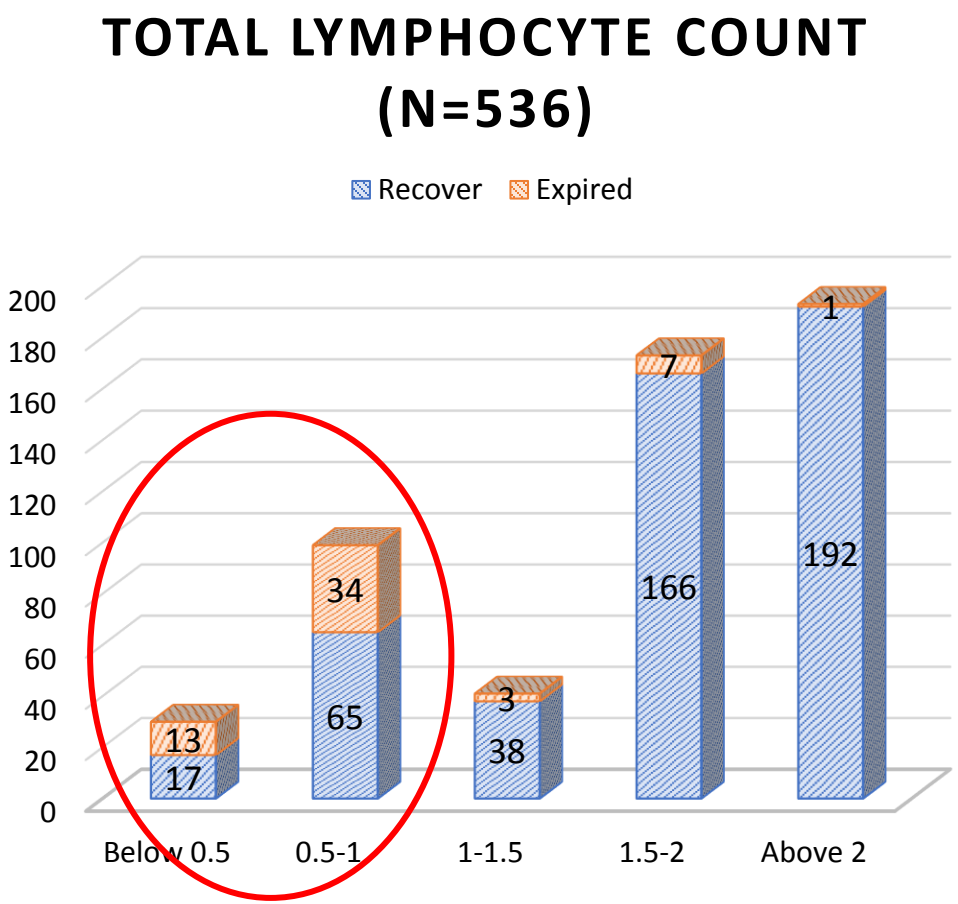
(1st phase)

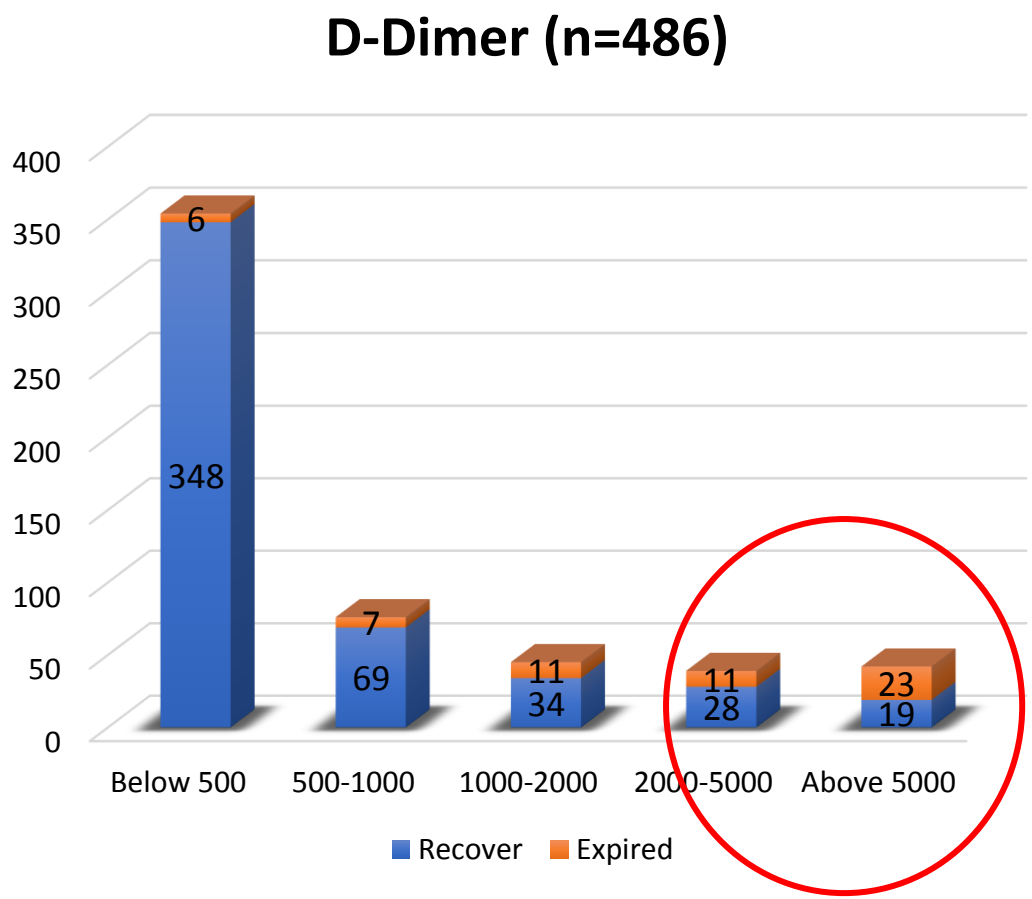
D-dimer	Male	Female	Total
Less than 500 IU/ml	50	31	81
500- 1000 IU/ml	5	7	12
1000 - 2000	2	3	5
2000-5000	4	2	6
More than 5000	1	4	5

(2nd phase)

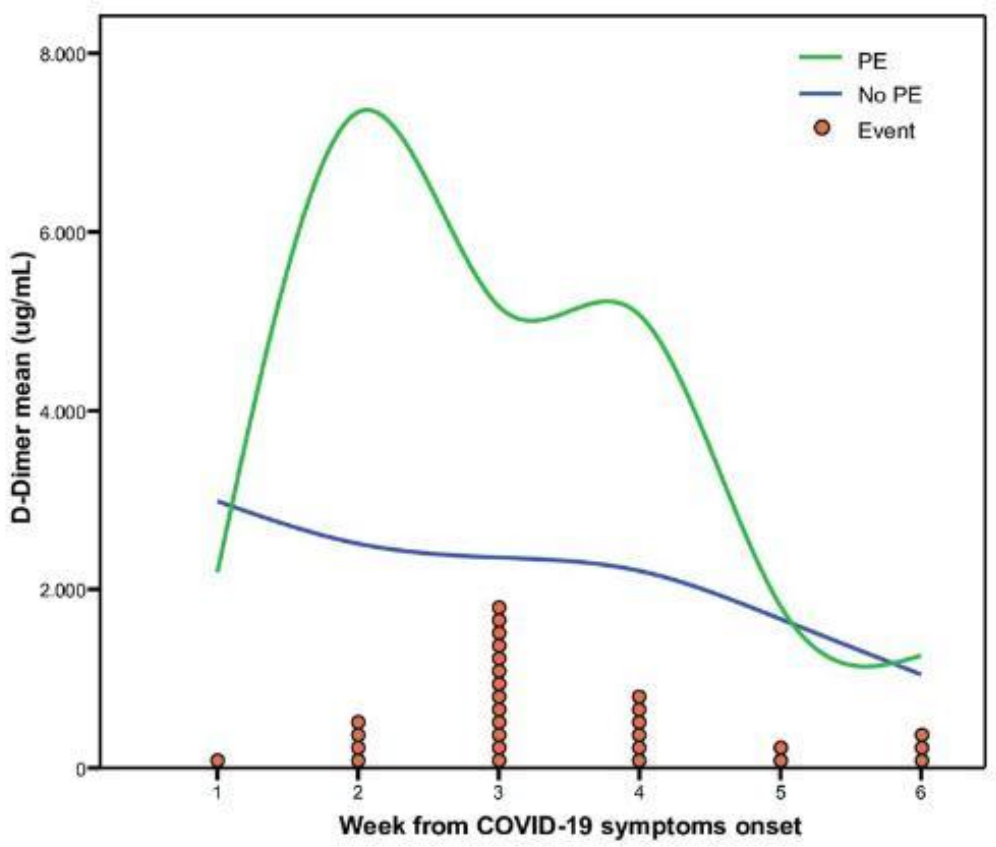
D-dimer	Male	Female	Total
Less than 500 IU/ml	141	193	334
500- 1000 IU/ml	36	40	76
1000 - 2000	18	27	45
2000-5000	27	12	39
More than 5000	21	21	42

Baseline TLC and D-Dimer and outcome





D-Dimer and Thrombotic complications in Covid-19



D-dimer levels are to be done on admission as part of work-up. If convalescent plasma is not given within 1-2 days it should be repeated 3 days later (even if the 1st is normal) or before con plasma is given. After con plasma transfusion it must be repeated at 3 days or earlier if needed and again repeated to show a upward or downward trend. Patients on discharge should have D-dimer within normal range, or else may need to continue LMWH.

There are 2 forms of trajectories for D-dimer. High trajectory and flat trajectory. Those with a high trajectory have a very high risk of thromboembolism (VTE or in situ thrombosis.) Usually this is seen in second week from onset of symptoms and onwards. Some advocate doing D-dimer at admission and repeating 3 days later even if the first is normal. A rising trend or a surge will indicate likelihood of thrombotic complications and need for prophylactic LMWH even if initial D-dimer is normal. Some advocate LMWH for all severe cases irrespective of D-dimer levels.

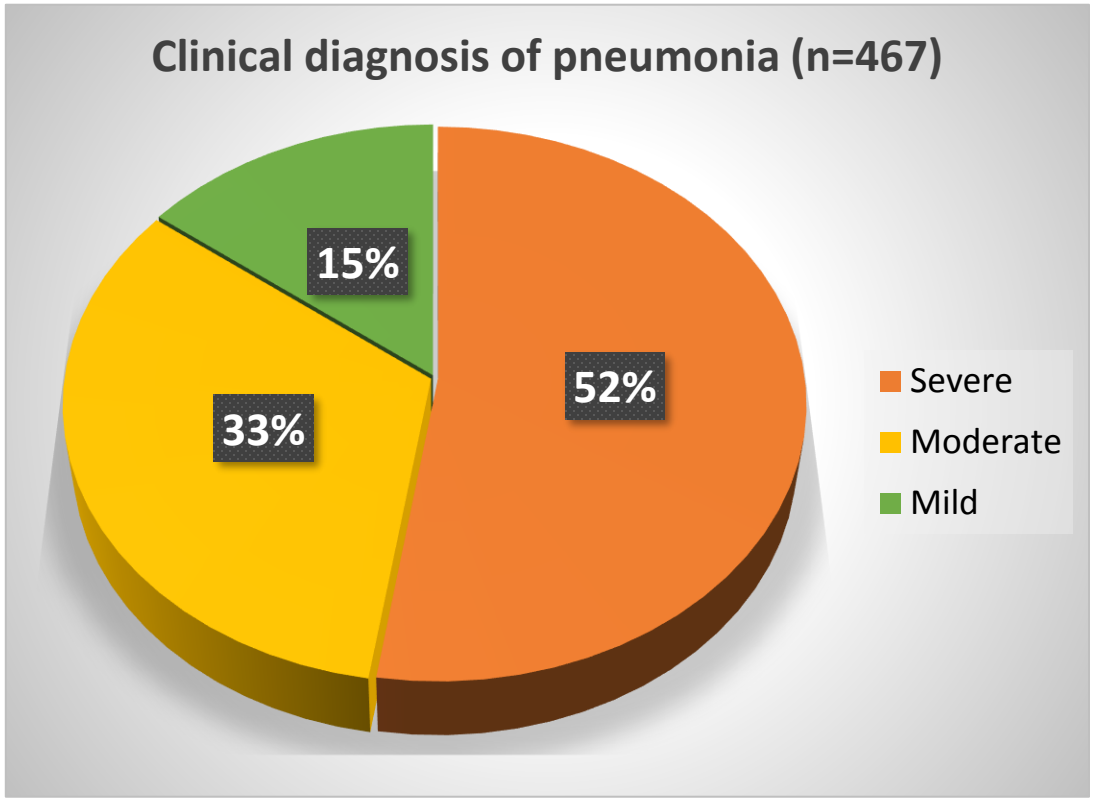
(This pattern was seen in patients not receiving convalescent plasma).

The basis of pathogenesis of covid disease is a thrombogenic state due to endotheliatis, production of thrombotic inflammatory cytokines and intra-alveolar thrombosis to trap virus. D-dimers also reflect the severity of the inflammatory state in addition to indicating thrombotic complications. The excessive thrombotic state in some people may be due to acquired antithrombin III deficiency and production of prothrombotic antibodies or excessive release of fibrinogen, causing heparin resistance.

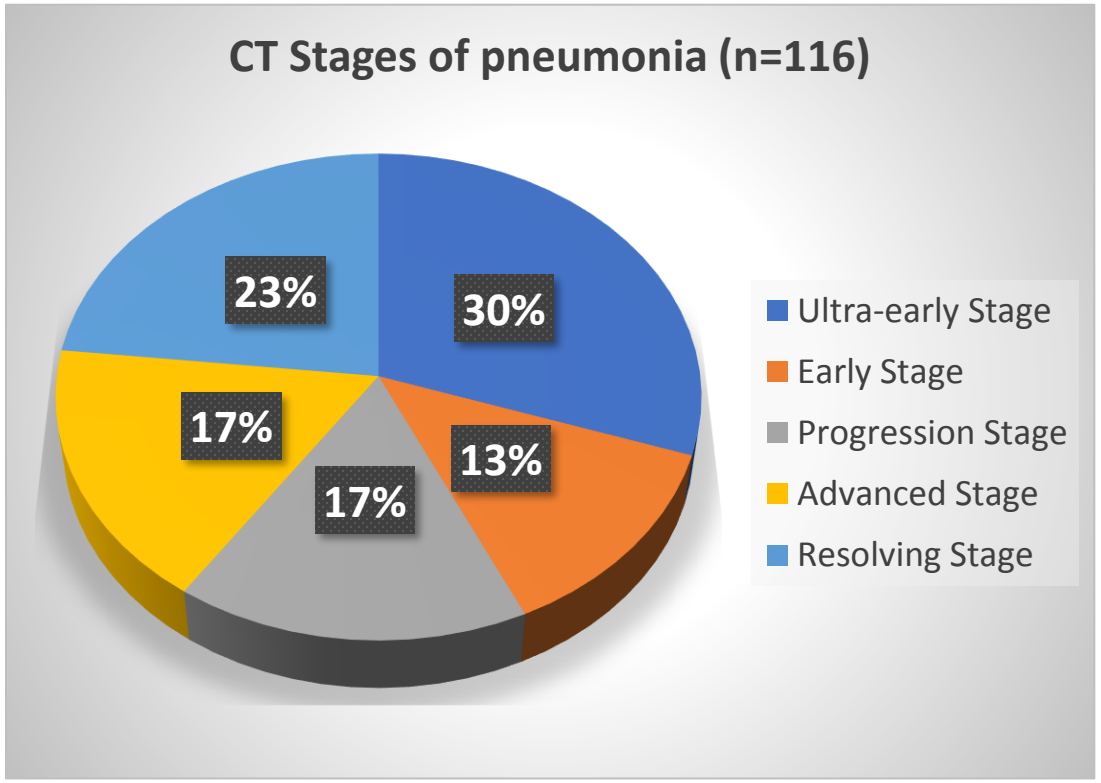
Prothrombotic autoantibodies in serum from patients hospitalized with COVID-19
Zuo[1], *Science Translational Medicine* 18 Nov 2020: Vol. 12, Issue 570, eabd3876
DOI: 10.1126/scitranslmed.abd3876

Credit – Professor Rai Mra

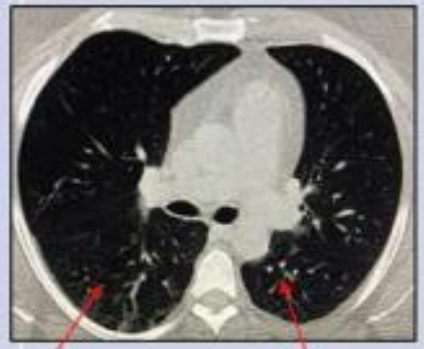
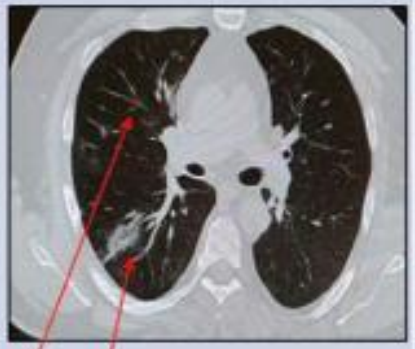
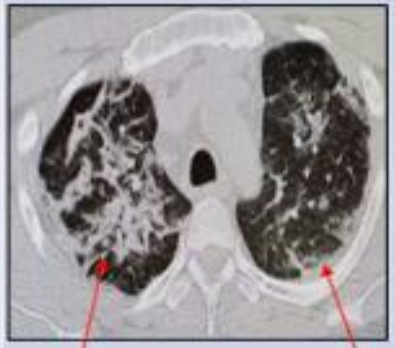
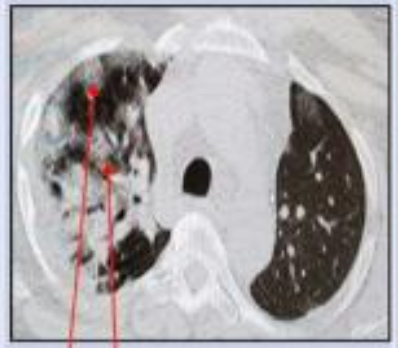
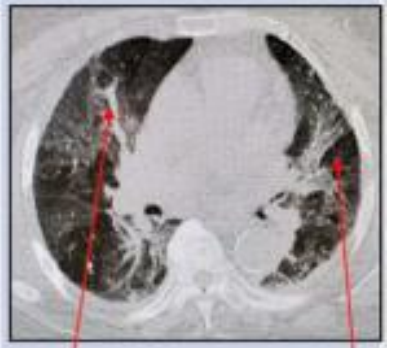
Clinical diagnosis of pneumonia



CT Stages of pneumonia



Stages of CT Chest

	Ultra-Early Stage	Early Stage	Rapid progression Stage	Consolidation Stage	Dissipation Stage
Findings	• Prior to symptom onset. • Throat swab positive, laboratory negative • Usually within 1-2 weeks of exposure.	• Patients present with symptoms (within 1-3 days of symptoms like fever, dry cough). • On histopathology - There is congestion of alveolar capillaries resulting in alveolar and interlobular interstitial edema.	• This stage follows within 3-7 days of symptomatic presentation. • There is an escalation in the hyperinflammatory response. Fibrous extensions that connect the alveoli begin to develop.	• This phase coincides with 2nd week of clinical symptoms. • The vascular congestion diminishes and fibrosis predominates.	• It occurs about 2-3 weeks after initial symptomatic presentation. • There is more of a healing and repair response within the lungs .
Images					
	CT scan demonstrates Bilateral, subpleural, multiple scattered ground glass opacities.	CT scan shows multiple, bilateral ground glass opacities. Irregular, interlobular septa begin to develop.	CT findings include subpleural, posterior consolidations, dispersed air bronchograms along with superimposed irregular septa.	There is a decrease in size and density of consolidations.	CT scan shows patchy consolidation, reticular opacities (strip-like opacities), bronchial and interlobular septal thickening.

Clinical case scenario

Expired Case 1

- 72 years old man , married , dependent, referred from YGH on 9.9.20 / 11:30 am.
- complaint of dizziness for 2 days, polyuria and polydyspsia for 2 days, shortness of breath for 1day
- denied history of fever ,cough
- RBS was Hi and referred to YGH and admitted at there on 7.9.20/7:30pm
- Past medical history of DM and Hypertension for 1 year
  - regular taking of Minidiab 1 BD, Linagliptin 5mg OD, Nervolin 75 mg OD, Nocid 1 BD ,Losar 25mg 1 Hs, Nifedipine R 20mg BD, Tamsulosin 0.4mg OD.

- Admission condition -respiratory distress presented and SpO was 72 % on air, BP -103/55,RBS was Hi. 8/9/20 10am. He became more dyspoenic and SPO 2 drop to 62 % with reservoir bag

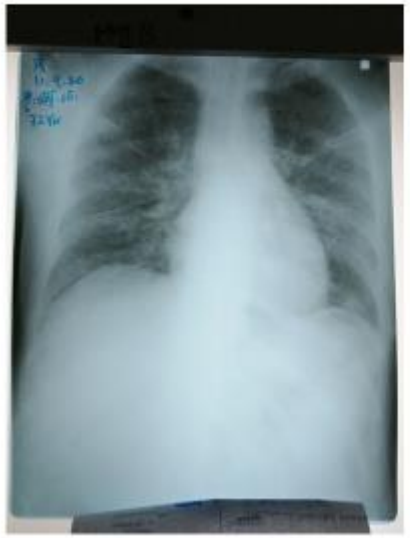
- 10.9.20 at SHW
  - SPO2- 93% on ventilated , PR – 118.ECG – LAD, sinus .CXR – bilateral infiltrates present
  - TLC ,RP 330, HbA1c- 9.1. LDH 741 , D-dimer 4600 ,Troponin T- 885.2 (0-14ng/ml).

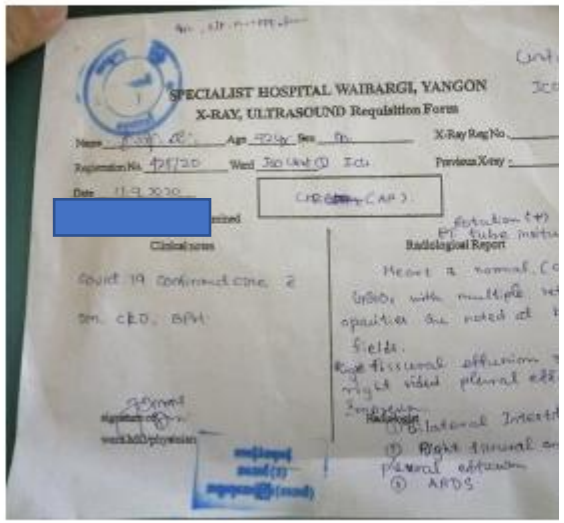
- BP – 128/78 with Noradrenaline infusion 0.3 micro g/kg /min
- SPO2 – 98 % on ventilated ,HR – 112/min, Intake 1800, Output – 20,

U & E, Cr rechecked showed **Creatinine is rising up to 6.9** and **K is rising up to 7.9, HCO3 is 21.**

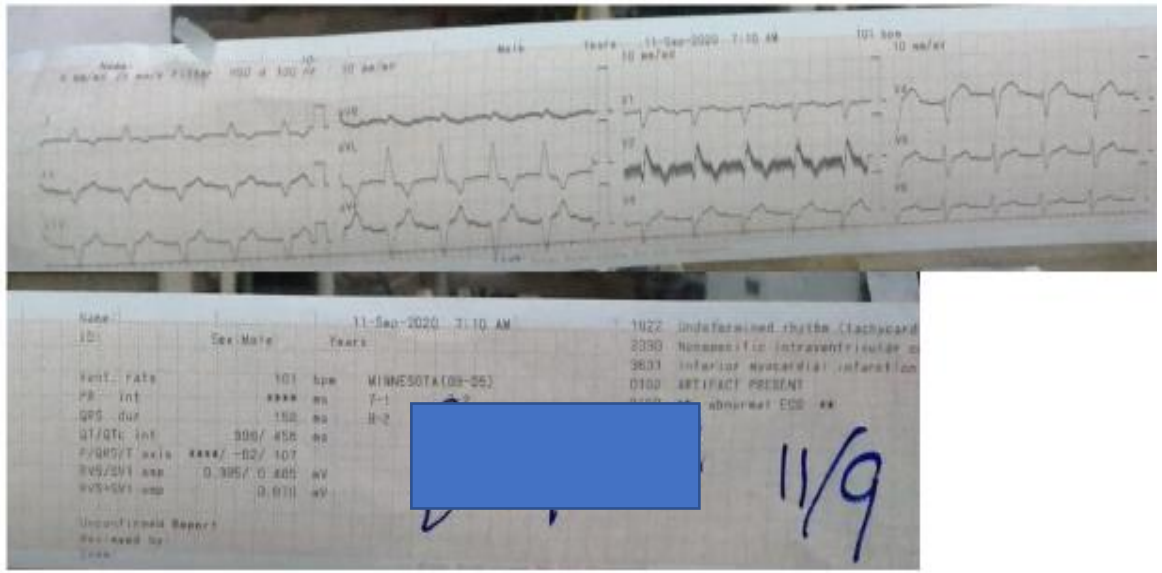
- We informed recheck result to Nephrologist team and their opinion is that patient is not haemodynamically stable at that moment and not fit for Haemodyliasis
- At 6:36am, 14.9.20 expired due to Acute on Chronic Renal failure due to uncontrolled Diabetes ,COVID pneumonia with ARDS underlying IHD and Hypertension
- Thanks for ICU Team and Renal Medical Team.

CXR on 11. 9.2020





[redacted]



DATE	UREA	Cr	Na	K	CL	HCO3
7.9.20	9	246	131	5.3	99	18
9.9.20	12.2	247	135	5.8	99	16
10.9.20	68	1.6	171	6.4	109	38
11.9.20	119	3.6				
12.9.20	221	6.9	132	7.9	105	21
139.20	288	7.7	134	7.9	107	21

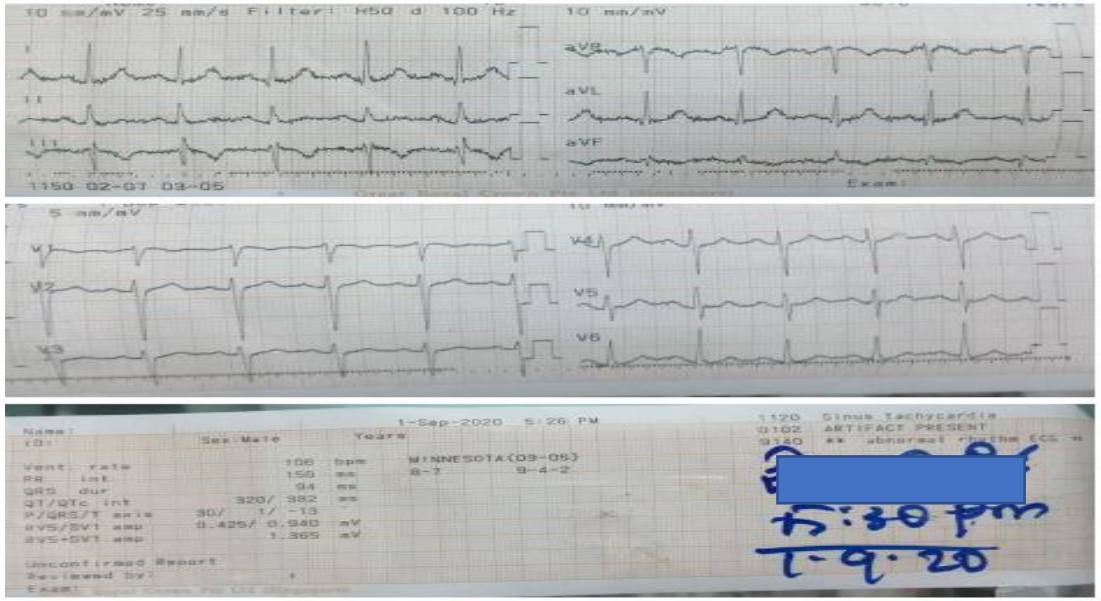
Expired Case 2

- 51yr Male
- complained of fever, cough and breathlessness since 22.8.2020. Breathelessness become worsen day by day within 5 days .
- No other special symptoms apart from symptoms above
- No relevant past medical or surgical history
- On arrival, GCS-15/15, T- 97.8 F, BP- 130/88 mmHg, PR-100/min, SpO_2 – 84 % on air and 88-94% with oxygen via reservoir bag. , RR- 32/min, RBS – 113 mg%.
- 2.9.20 – given 2 units of Con. Plasma and Steroid .10 L reservoir bag
- 5.9.20 on CPAP FiO2 100% and ActemraWBC – 17.64 to 18.36 to 24.08. TLC is 1.29 ,CRP is still >200, D-Dimer is still > 5000, diagnosed as cytokine storm on day 5 plasma transfusion.

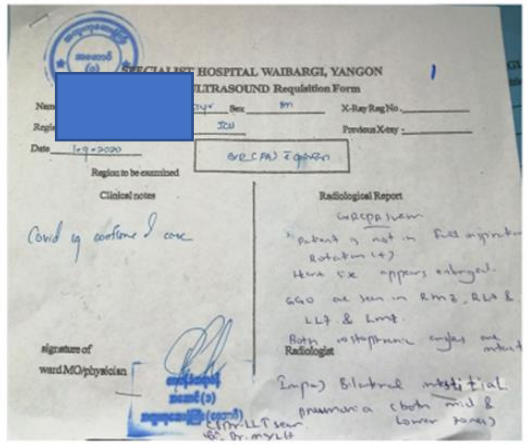
- 8.9.2020/12MN, GCS – E1, V- ETT, M- 1 under sedation, BP - 178/114 mmHg, PR-145/min, SpO2–88% on AC-VC mode, FiO2 100%, VT -420ml, PEEP – 10
- Patient expired at 3:30 AM / 9.9.20
- Cause of death 1 (a) Cardiac arrest (b) Acute Respiratory Distress Syndrome (c) Severe COVID Pneumonia (Ventilated).

Expired Case 2

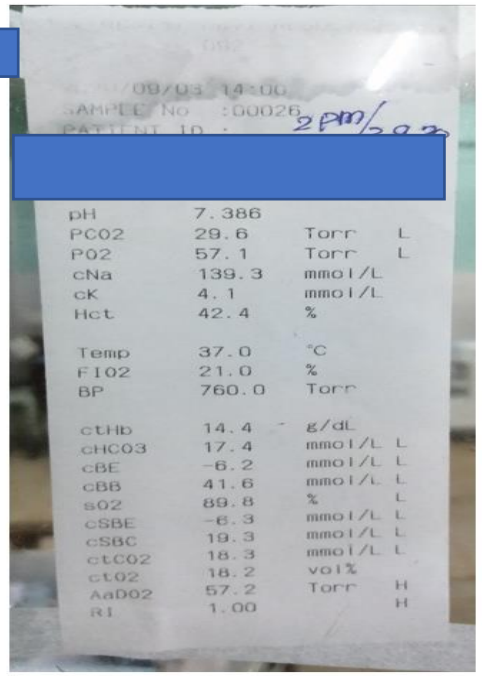
Date	Hb	Neu:	Lympho cyte	Platelet	Creatin ine	LDH	Ferritin	PT	D-dimer	CRP
2.9.2020	15.4	15.7	1.08	348	1.3		>2000	11.4	>5000	63.3
5.9..2020	13.7	16.8	0.99	308	1.4	613				>200

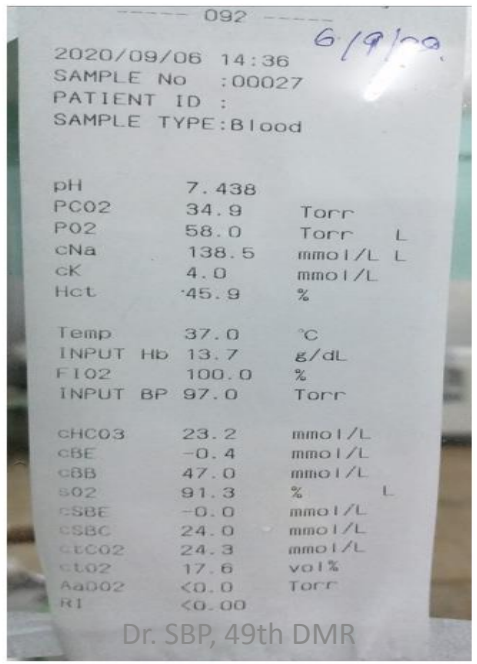


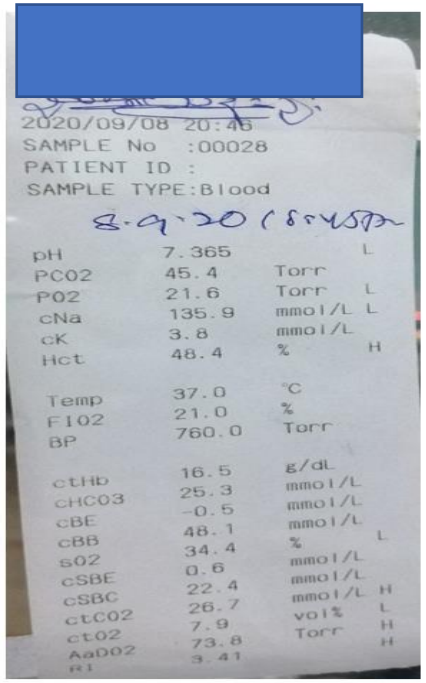
CXR(PA) 2.9.20

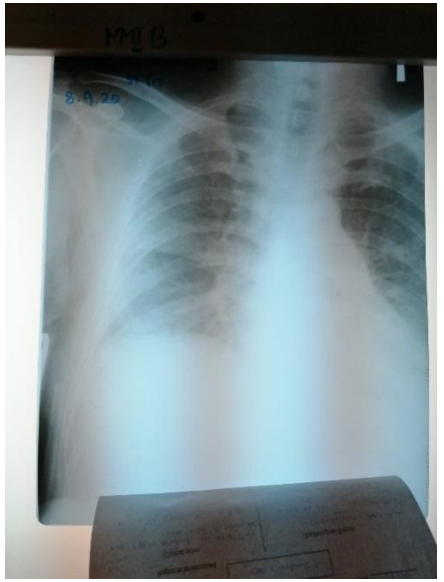


ABG of [redacted]









Lesson learn from India

Mild or Atypical Illness in 82%, Moderate to Severe Illness in 15%, Critical Illness in 3% and Death in 2.3% cases (15% of admitted serious cases, 71% with comorbidity< Male > Females); affects all but Predominantly Males (56%, 87% aged 30-79, 10% Aged < 20, 3% aged > 80); with Variable Incubation Period days (2-14; mean 5.2 days); Mean Time to Symptoms 5 days; Mean Time to Pneumonia 9 days, Mean Time to Death 14 days, Mean Time to CT changes 4 Days, Reproductive Number R0 1.5 to 3

Enters through MM of eyes, nose or mouth and the spike protein gets attached to the ACE2 receptors. ACE2 receptors make a great target because they are found in organs throughout our bodies (heart muscle, CNS, kidneys, blood vessels, liver). Once the virus enters, it turns the cell into a factory, making millions of copies of itself, which are then breathed or coughed out and infect others.

Early treatment, day 3-5, to reduce the viral load and prevent cytokine storm

Oxygen requirement on that day in the hospital at 6am: Number of cases detected to have hypoxia on six minutes walk test.

Hypoxia: Low flow oxygen < 6l/mt, titrated to high flow oxygen using non rebreathing mask, Venturi mask, HFNC and helmet CPAP, NIV in supine or prone position

Requirement of ventilators on day 9: 1-3% of number of new cases detected

Requirement of future oxygen on day seven: 10% of total cases detected today

Interesting Cases

Case 1

- 39 years old male
- Complaint of low grade intermittent fever for 2 days
- Admitted on 31.8.2020
- History of hypertension for 2 years

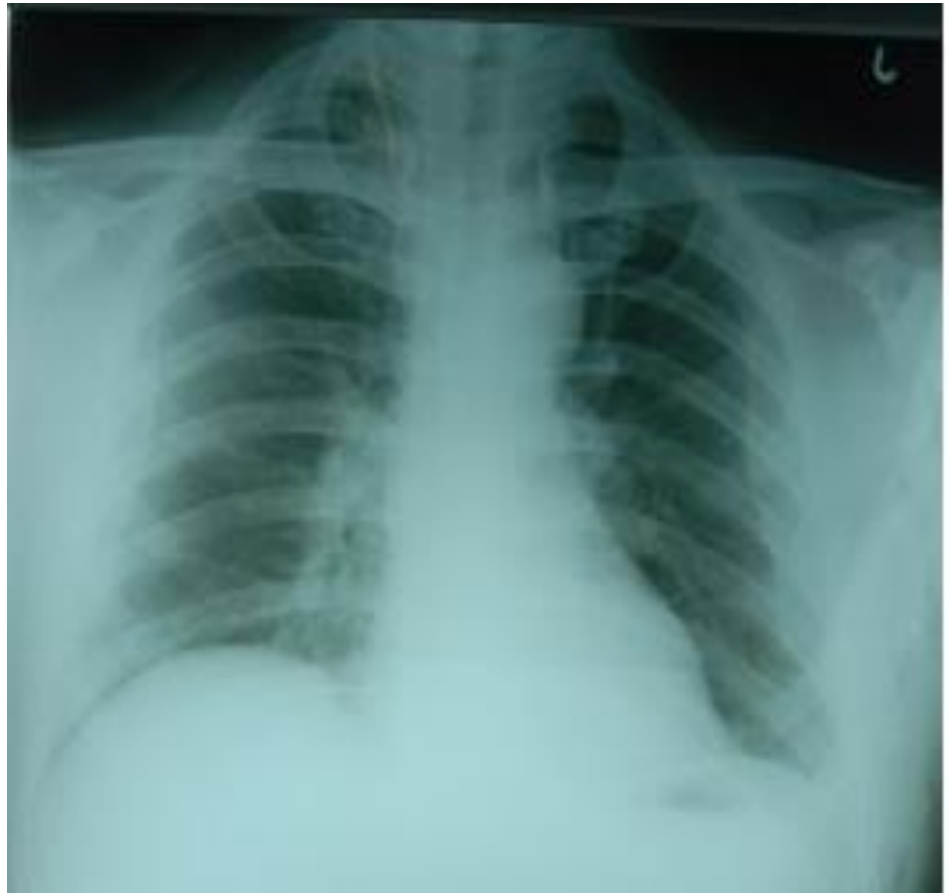
On arrival,

- GCS-15/15, T- 99’F
- BP- 143/90 mmHg, PR- 110/min
- SpO2 97% on air, RR- 18/min

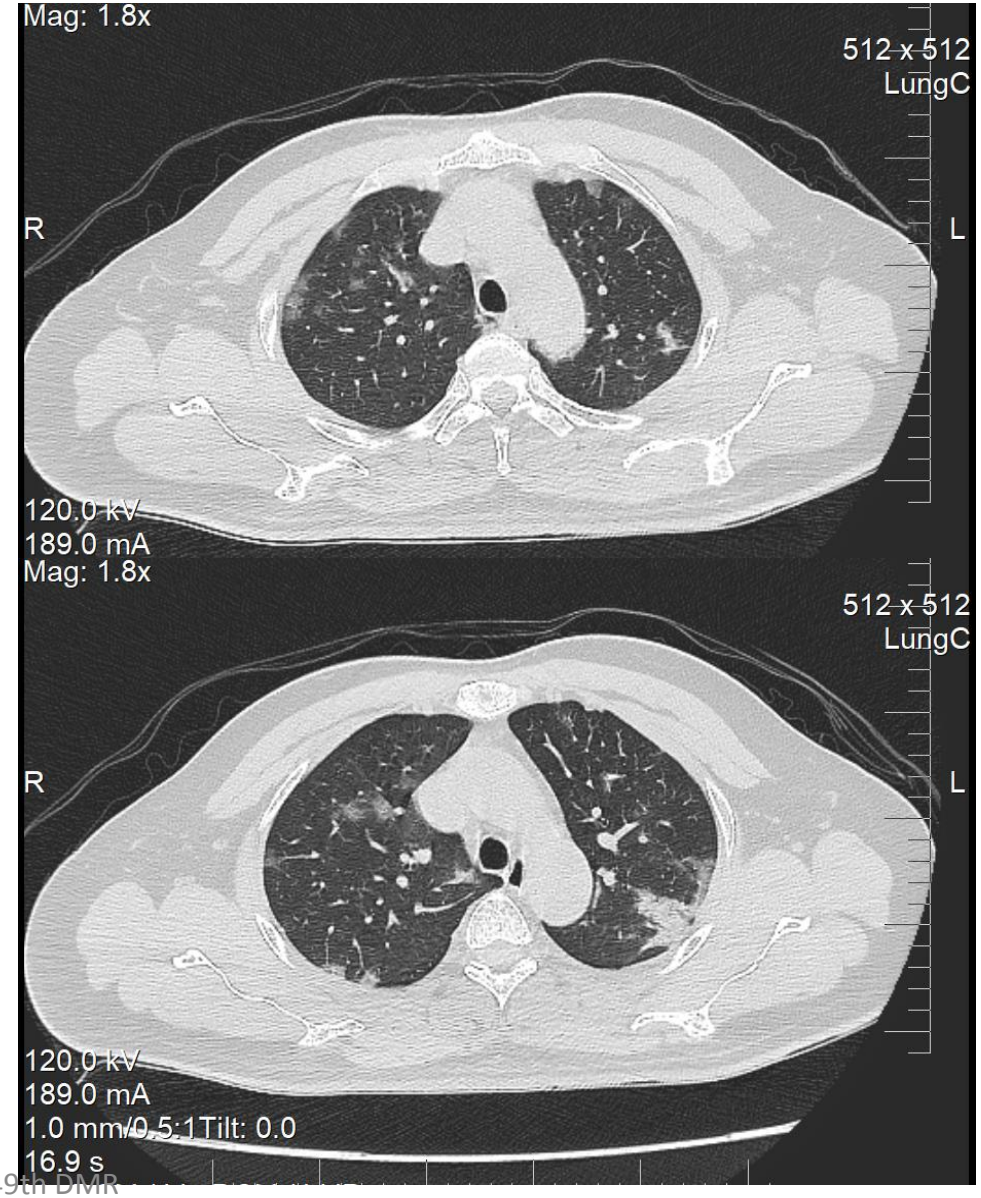
5 days after admission, fever, cough & exertional dyspnea, SpO2 96%

Case 1

CXR – 30.8.2020 - NAD



CT Chest 5.9.20

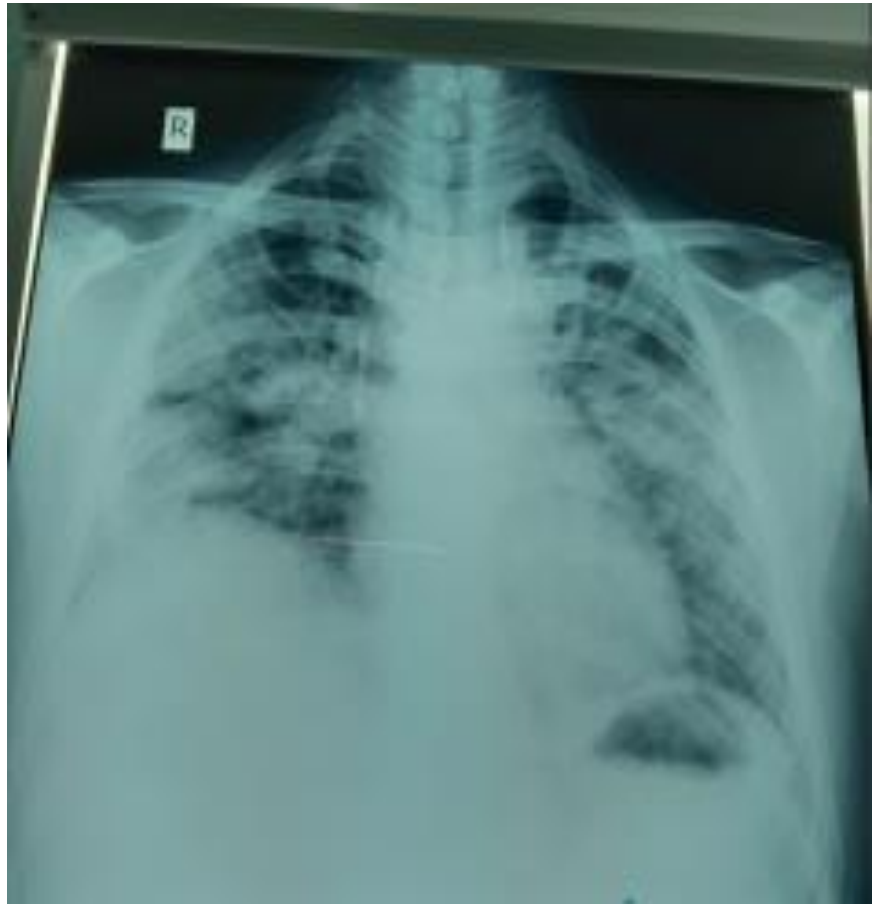


Date	31/8/20	1/9/20	7.9.2020	10.9.2020	12.9.2020	14.9.2020	22.9.2020	8.10.2020
Hb%	13.3		11.7	13.6	13.5	12.5	12.8	12.9
WBC	5.65		5.88	5.27	5.27	10.95	17.76	6.68
Lymphocyte	1.46		0.59	0.85	0.85	0.33	0.97	2.82
Granulocyte/NEU	3.5		5.01	3.82	3.82	10.32	16.21	2.77
Platelet	206		287	439	219	531	381	450
Na+	135		139	146	135	136	140	
K+	4.9		4.1	4	4.2	4.2	5	
Cl-	96		103	101	102	101	99	
HCO3-	25.5		24	26	23	24	21	
urea	1.5		46	32	29	40	32	
Creatinine	85		1.2	0.8	1	1.2	1.2	
Total Bilirubin		0.53	0.54	0.93	0.68	0.65	1.08	
ALT		60	47	129	343	198	86	
AST		152	47	69	116	54	29	
ALP		442	131	215	213	334	291	
D dimer		400	400	1400	400	300	600	
PT			10.9	12.5	12.5	12.7		
INR			0.92	1.06	1.06	1.08		
LDH		245	395		709.6	600	347	
CRP		19.91	77.8	112.3		17.8		6.3
ESR								

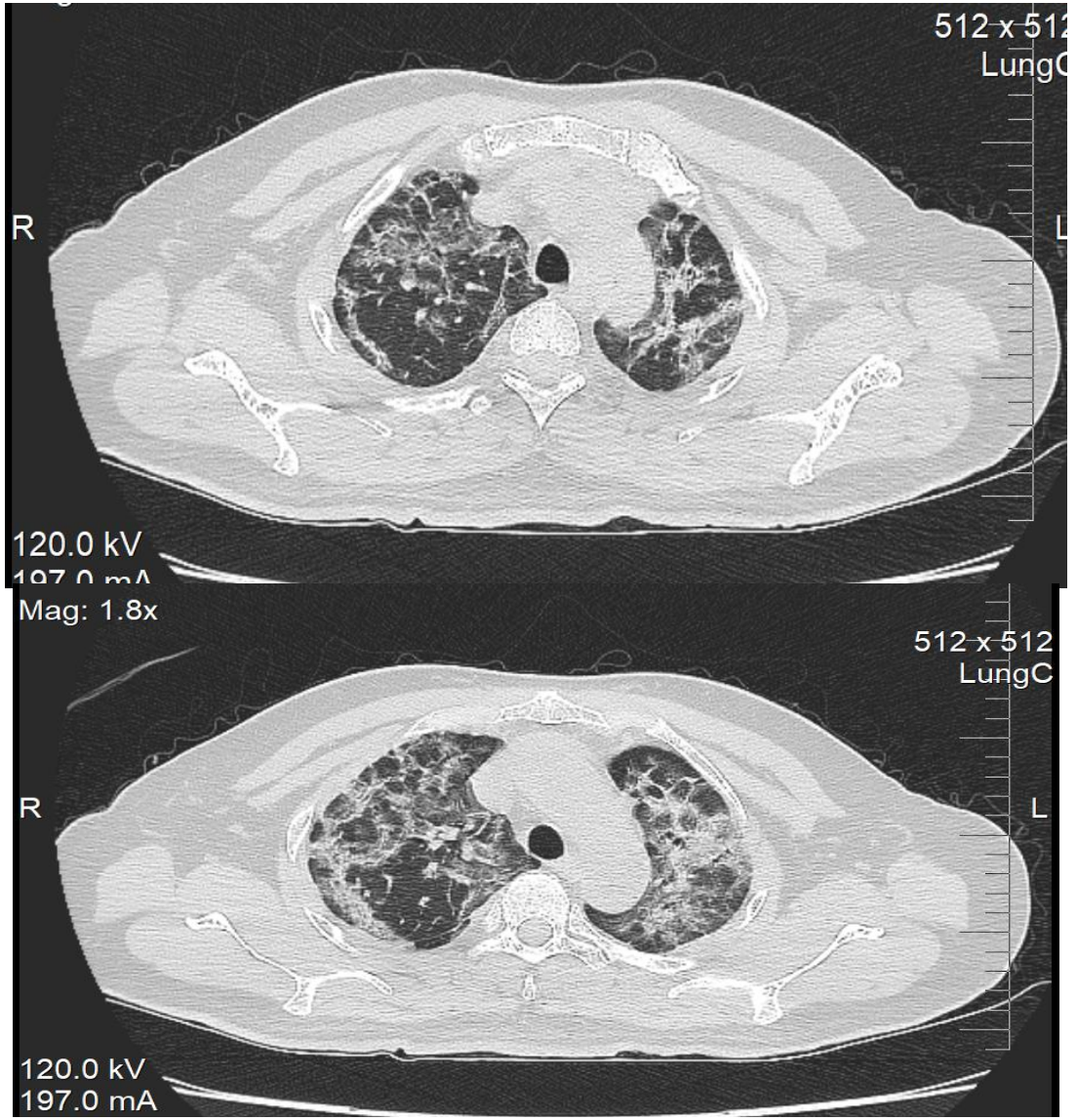
Case 1

CXR – 21.9.2020

Bilateral multiple consolidation

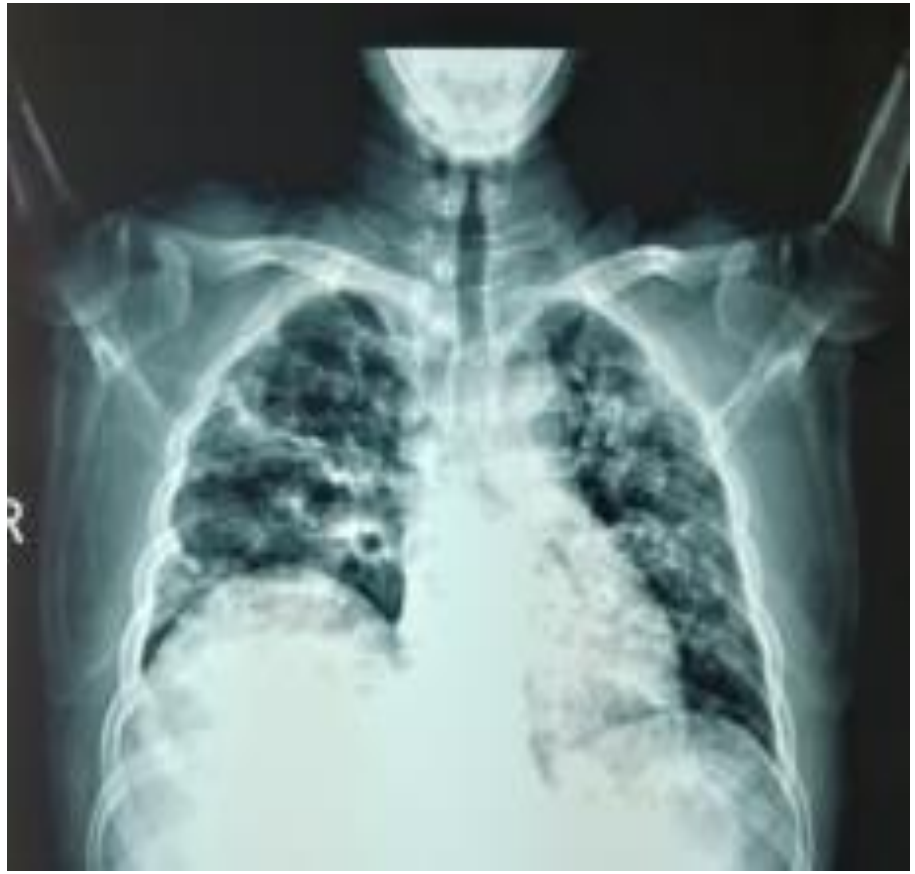


CT Chest 28.9.20

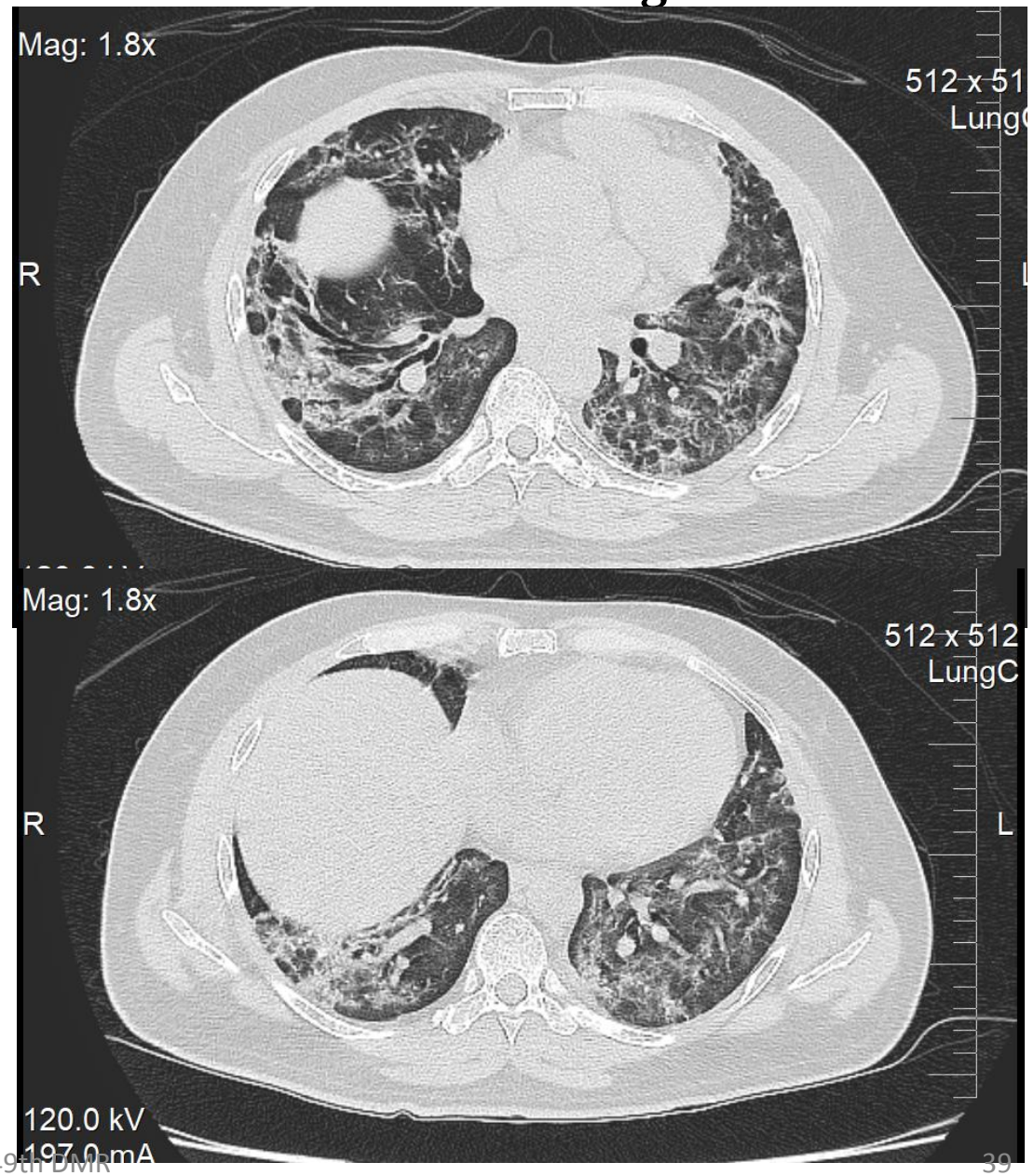


Case 1

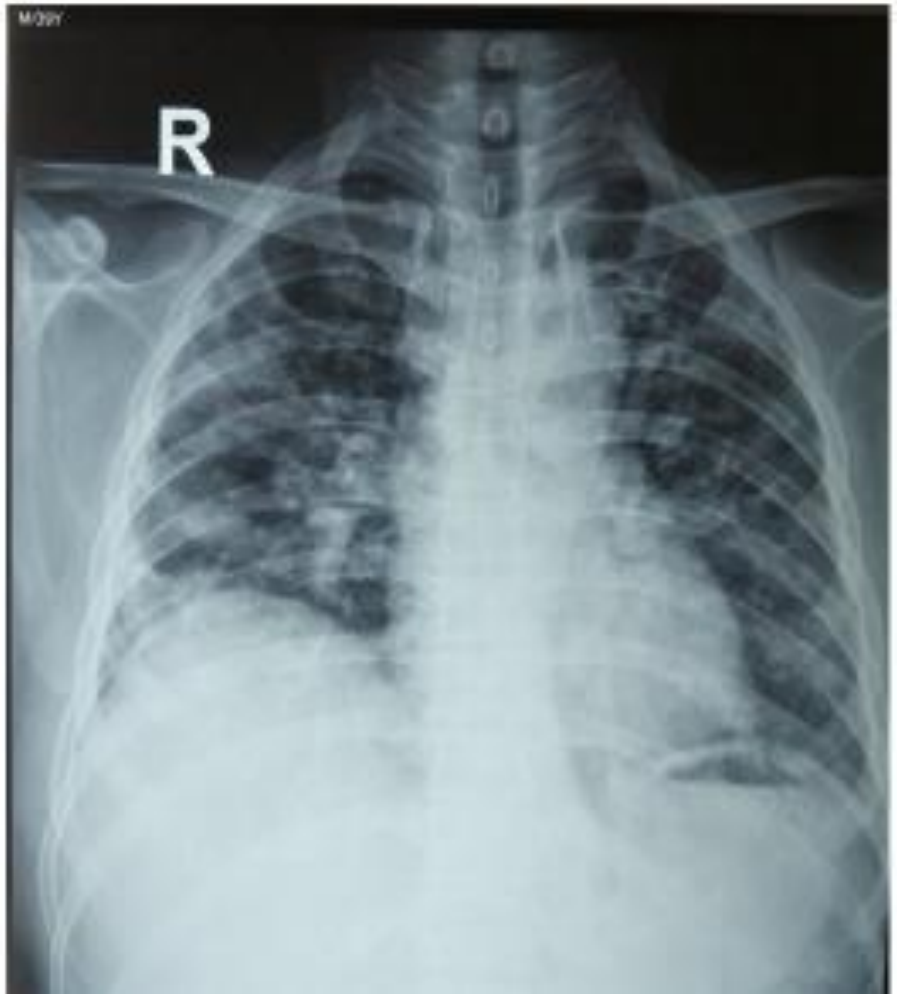
CXR – 28.9.2020

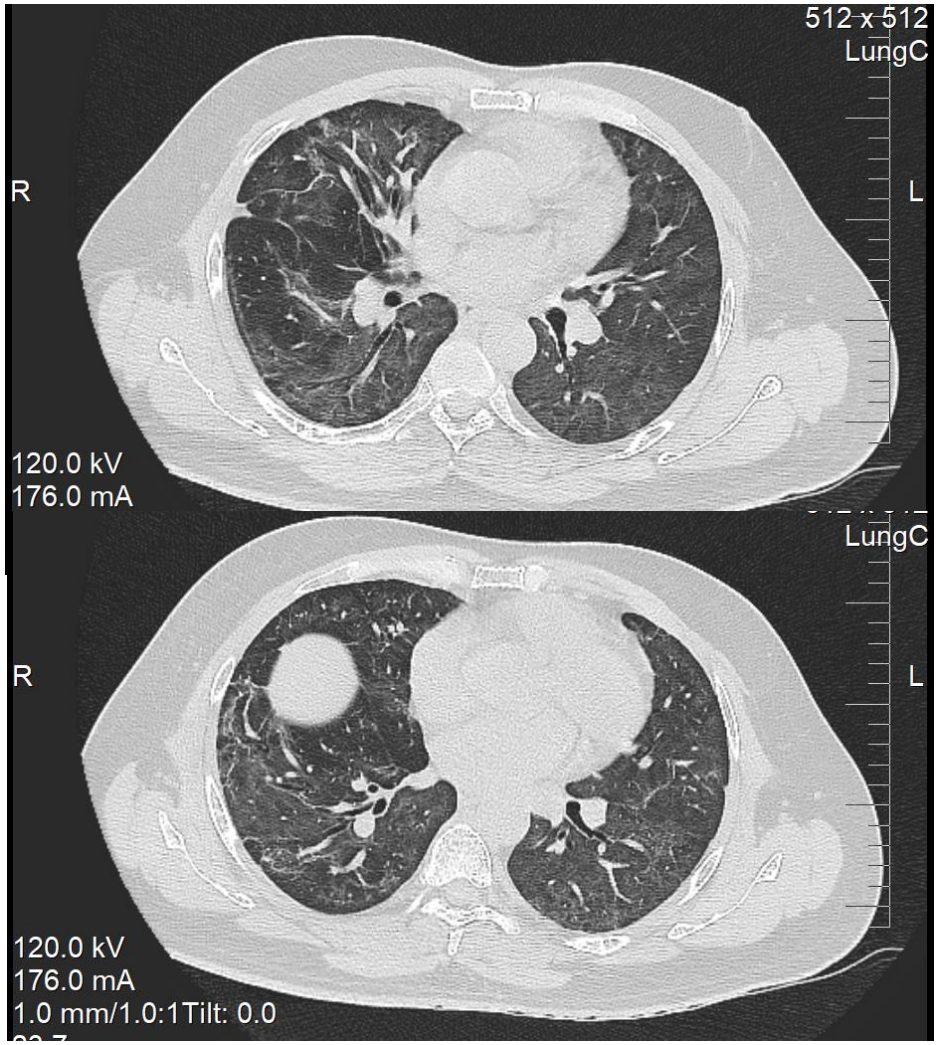


CT Chest – Advanced Stage – Score 16



Still resolving stage, CT score- 15





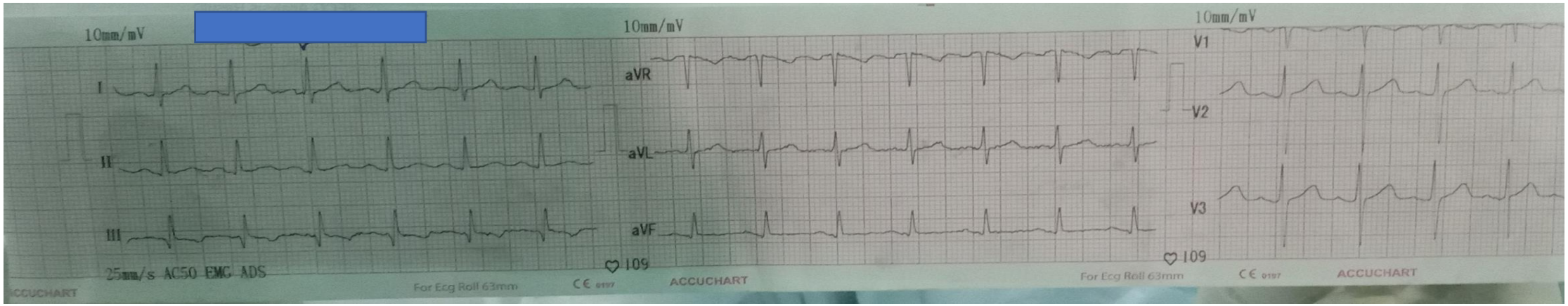
Case 1

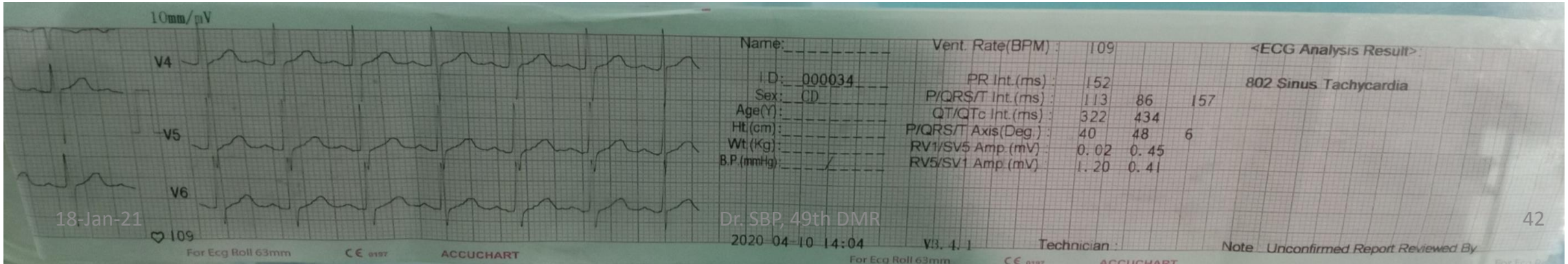
- On 7.9.2020, Pt was transferred to ICU due to more dyspnoeic & SpO2 93% on air.
- Oxygen Therapy at ICU - O2 10 L with Reservoir bag for 10 days, 8L/min for 3 days, then 5 L/min for 2 days.
- Injection Dexa was given 17 days.
- 8.9.2020 and 9.9.2020 plasms 2 units given each day.
- Total hospital stay – 40 days, including ICU stay for 11 days.
- Consultation to Chest Medical Team for further management.
- Thanks for ICU Team and Chest Medical Team.

Case 2

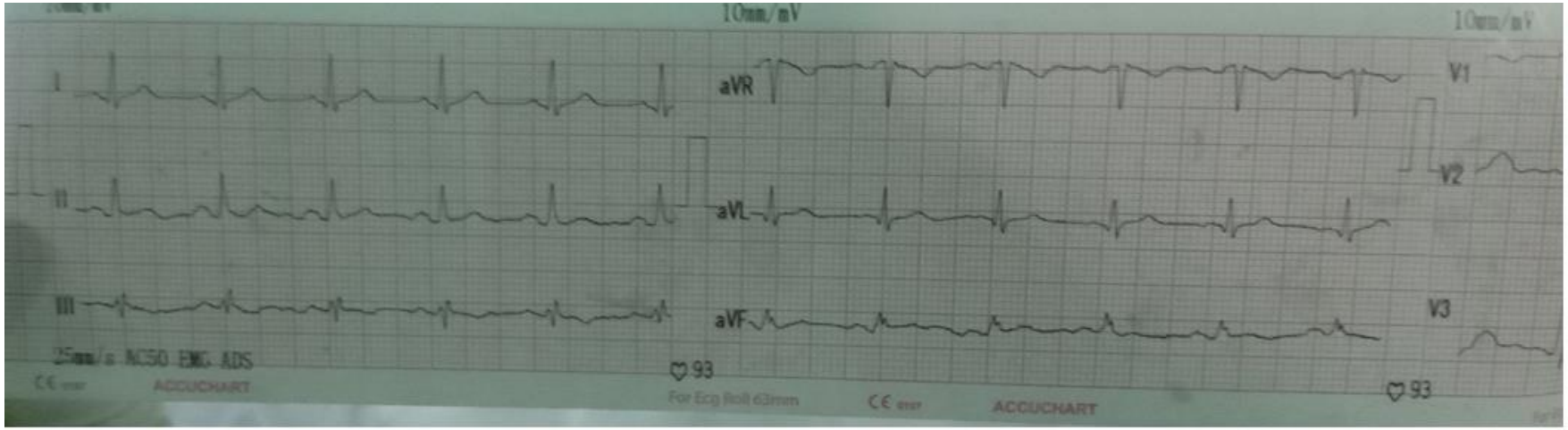
- 32years old man come from Singapore on 19.3.2020
- SARS-CoV 2 positive on 09.04.2020
- Referred from NOGH to SHW on 10.4.2020/1:00 AM with the chief complaint of fever for 8 Days , dry cough for 2 days with sore-throat. No chest pain , No GI symptoms but myalgia and loss of appetite was present.

Baseline ECG on 10/4/2020 (Before Hydroxychloroquine) QTc 434

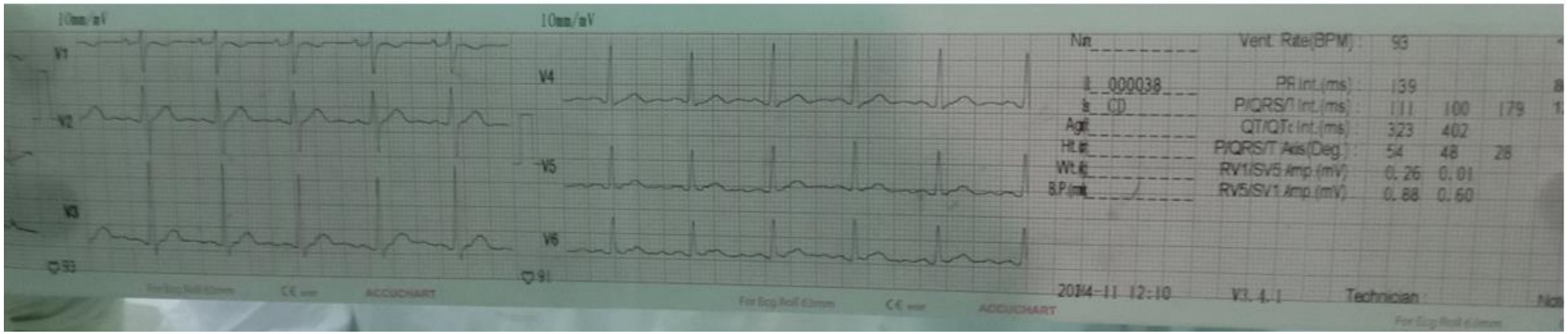




After Hydroxychloroquine



QTc - 402



Case 2

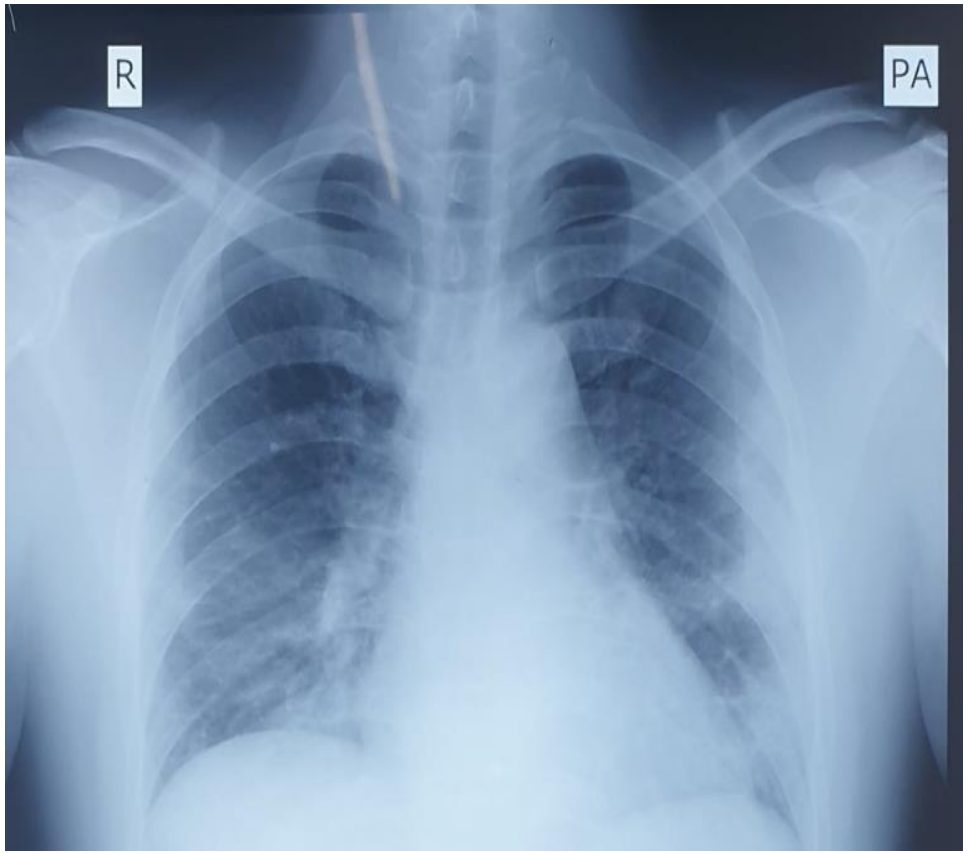
Date	WBC	N	L	Hb	MCV	Plt	CRP	ESR
8/4/2020	5.77	4.22	1.18	16.6	80.9	139	-	-
10/4/2020	5.8	4.94	0.7	22.7	80	69	123.7	21
15/4/2020	7.2	4.6	1.33	14.9	78.1	460	159	61
20/4/2020	9.46	7.8	1.45	15.5	81	315	59.4	-

Date	PT	INR	D-dimer	LDH				
10/4/2020	17.4	1.54	600	47.7				
20/4/2020			1360	276				

Case 2

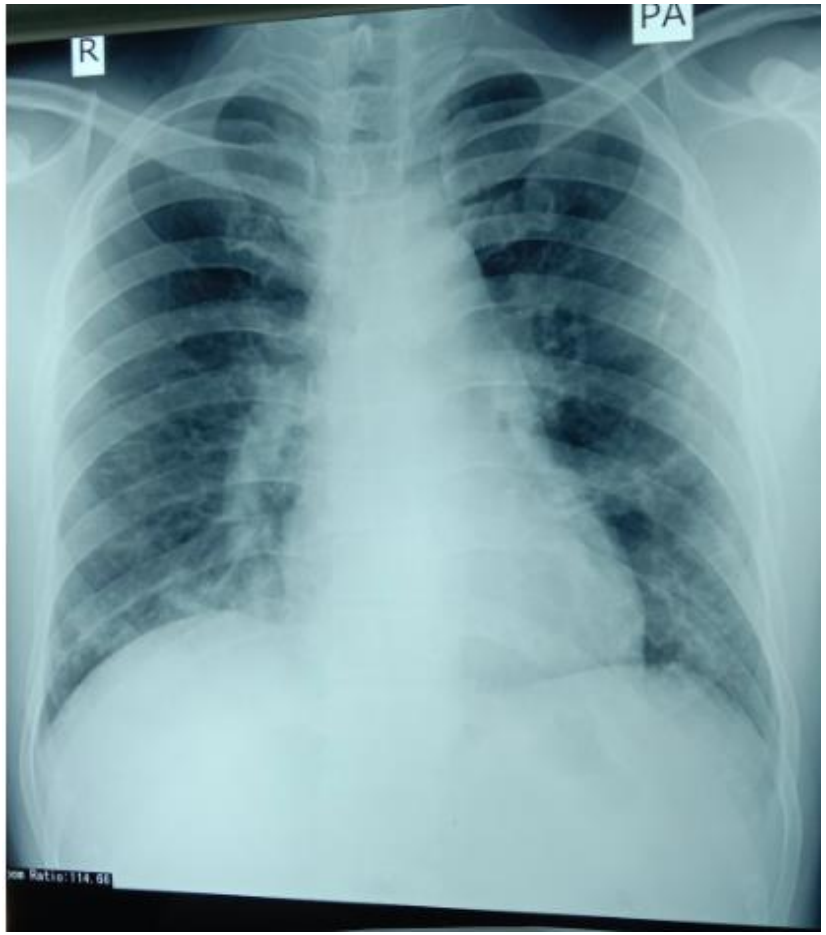
CXR 10.4.2020

Basal Consolidation



Recheck CXR on 19.4.20

Left Basal Pneumonia

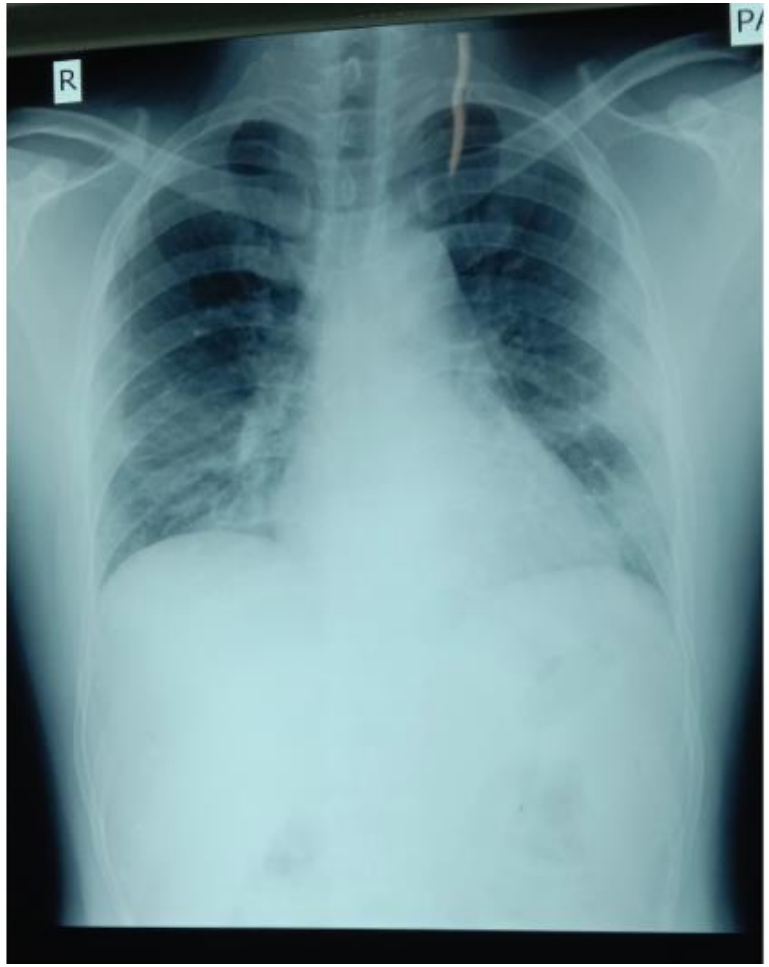


Case 2

- 10.4.2020 - PO HCQ 200mg BD x 5 D, PO Azithromycin 500mg OD x1 d f/b 250mg ODx 4 D
- IV Cefoperazone +Sulbactam 2G 12 Hrly x13 D up to 21.4.2020
- Recheck CXR was done on 19.4.2020 and revealed Left basal pneumonia. PO Cefixime 200mg BD was given up to 22.4.2020.
- He complained of chest pain, cough & dyspnea without fever. Rechecked CXR was done again on 22.4.2020 and revealed Left basal pneumonia. D-dimer was also increased from 600 to 1360 ng/ml. Problem of unresolved left basal pneumonia, tachycardia made a provisional diagnosis of pulmonary embolism.
- 23.4.2020 - SC Enoxa 0.4ml OD 5 days and restart it for 3 wk due to CT result
- CT result on 18.5.2020 showed Pulmonary Embolism.
- New oral coagulant (Rivaroxaban) 15 mg BD x 2 wk followed by 20 mg OD x 10 wk

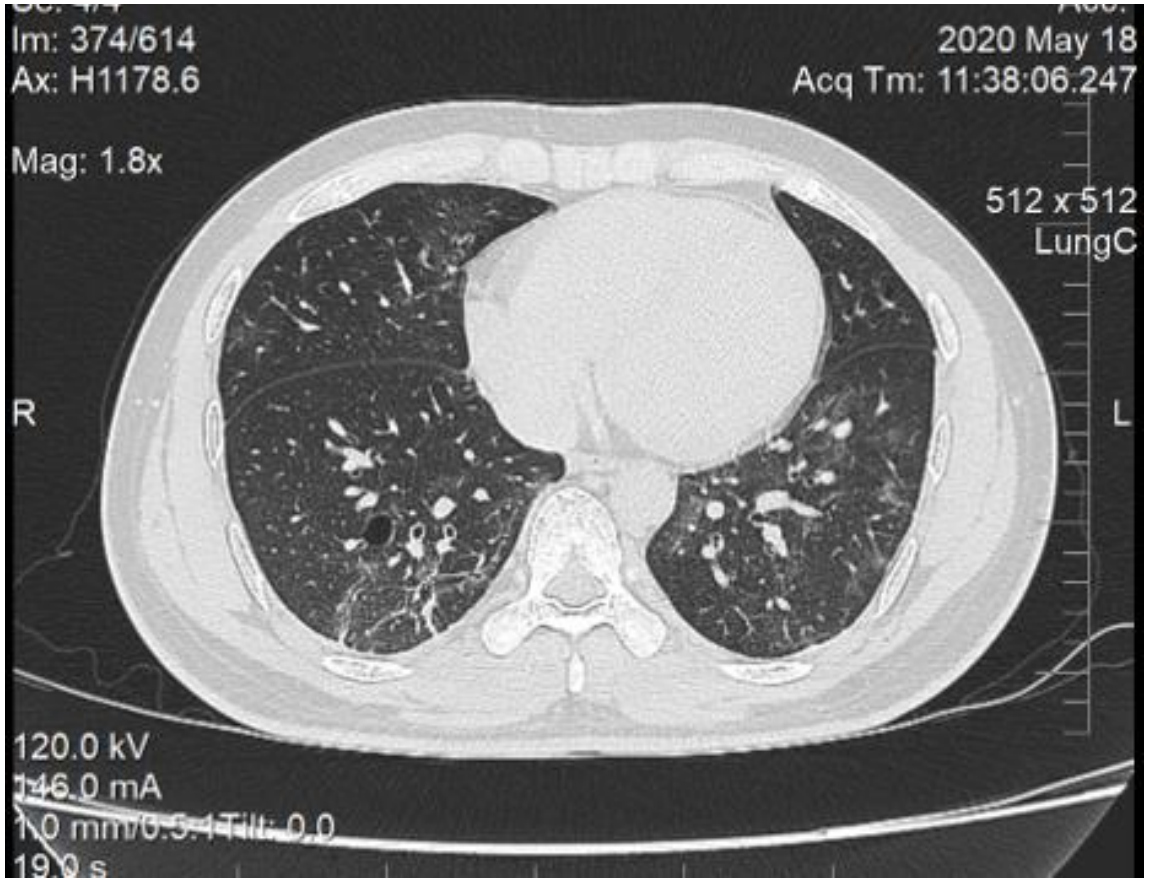
Case 2

Left Basal Pneumonia 22.4.20

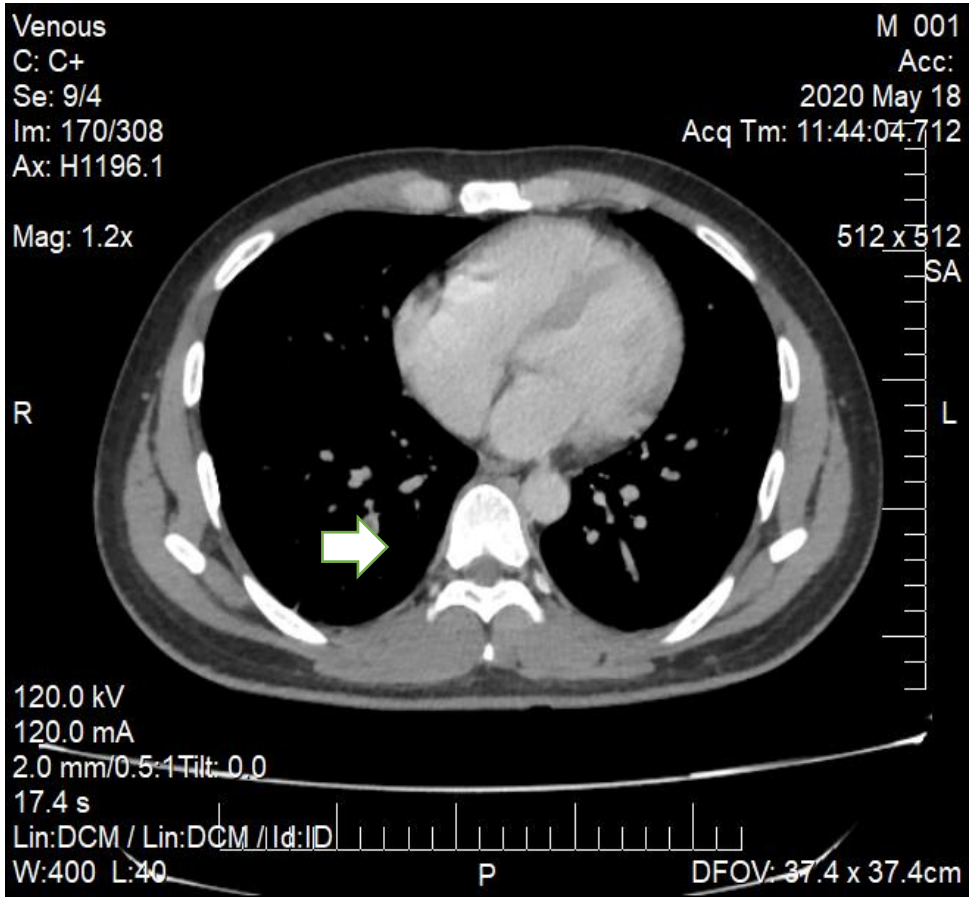


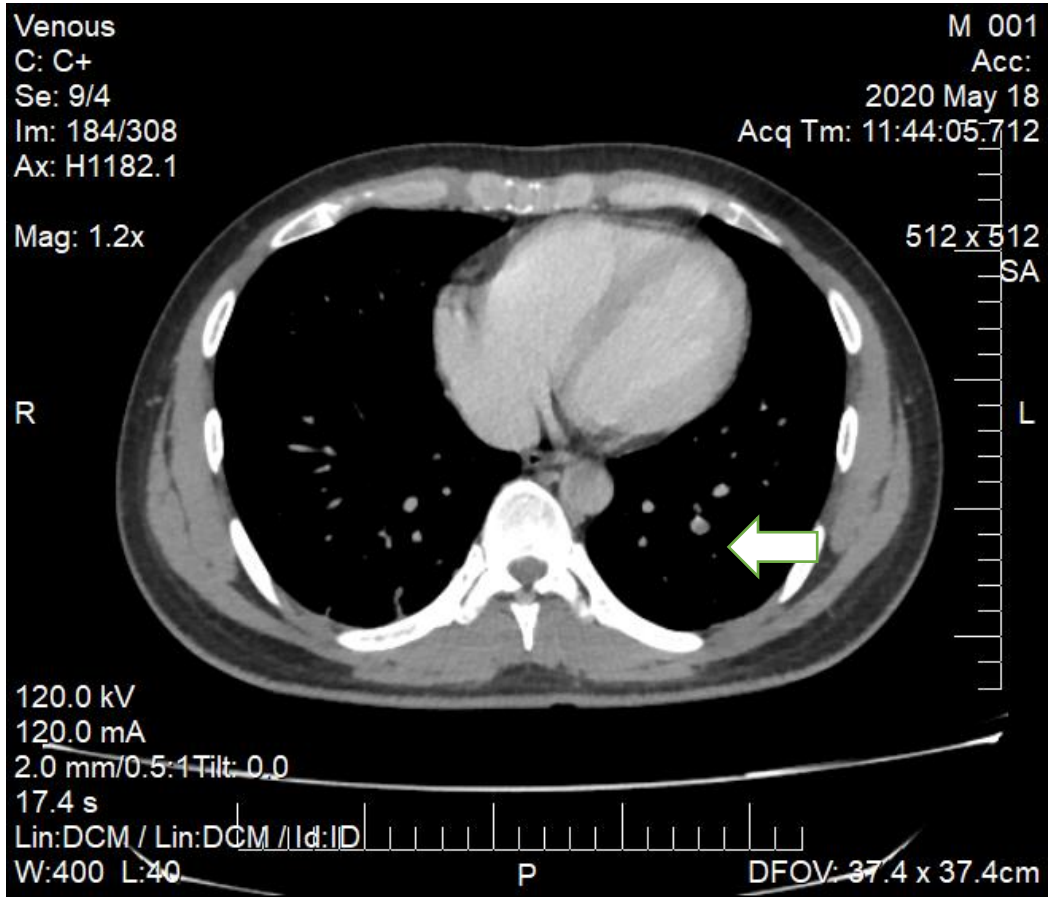
CECT Chest 18.5.20

(Resolving Stage CT Score 7)



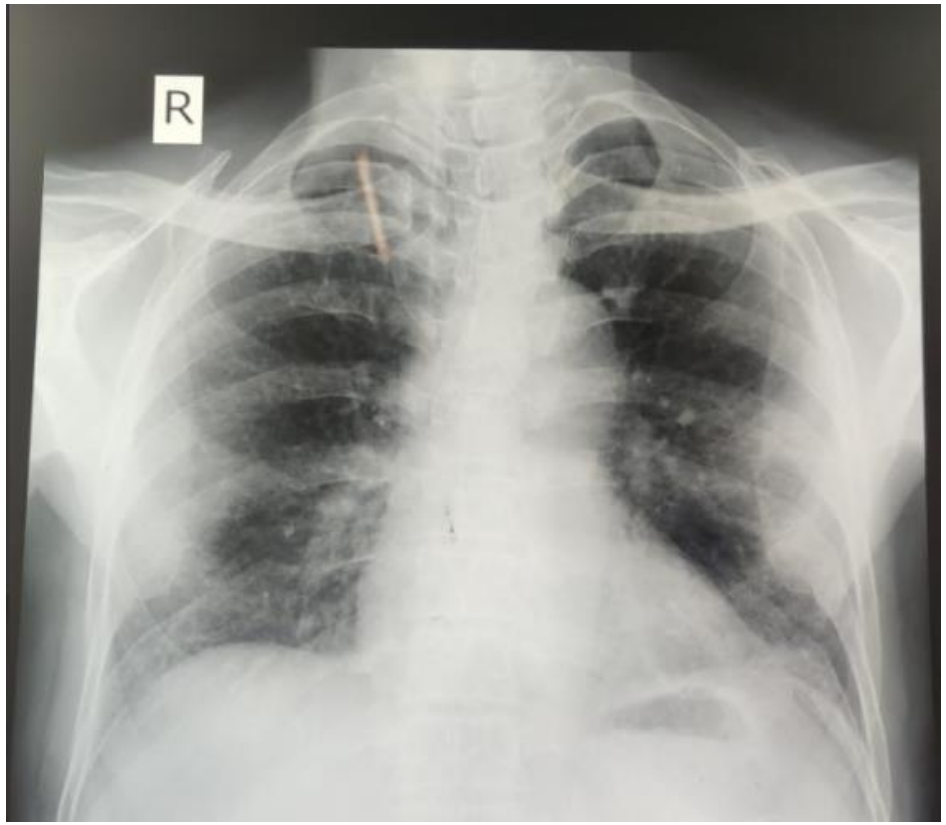
Pulmonary Embolism 18.5.2020



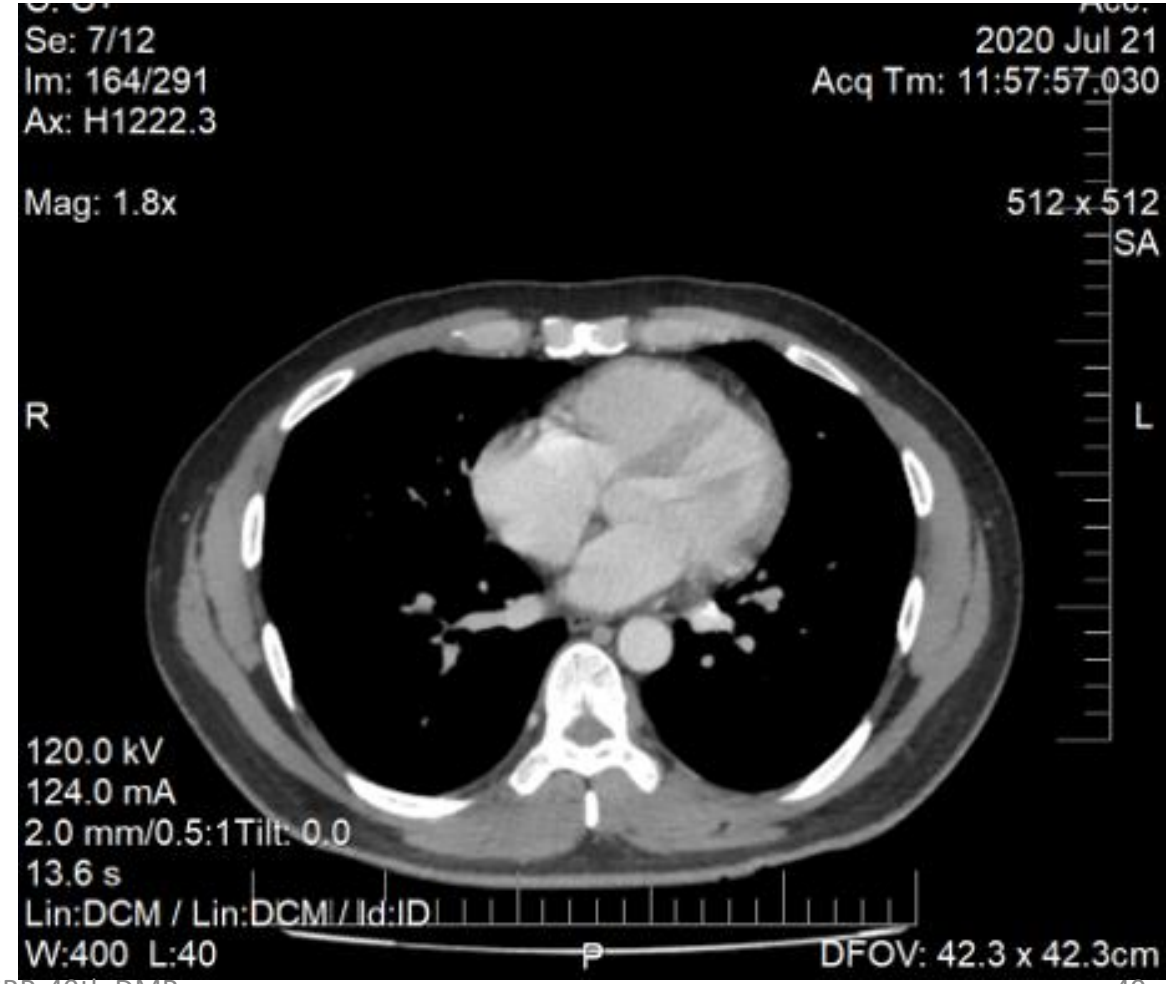


Case 2

Follow Up CXR 8.6.2020



21.7.2020 - No pulmonary embolism on recheck CT



Recommendations for the regimen and duration of anticoagulation after PE in patients *without* cancer (1)

ESC European Society of Cardiology

Recommendations	Class	Level
Therapeutic anticoagulation for at least 3 months is recommended for all patients with PE.	I	A
Patients in whom discontinuation of anticoagulation after 3 months is recommended		
For patients with first PE/VTE secondary to a major transient/reversible risk factor, discontinuation of therapeutic oral anticoagulation is recommended after 3 months.	I	B

©ESC

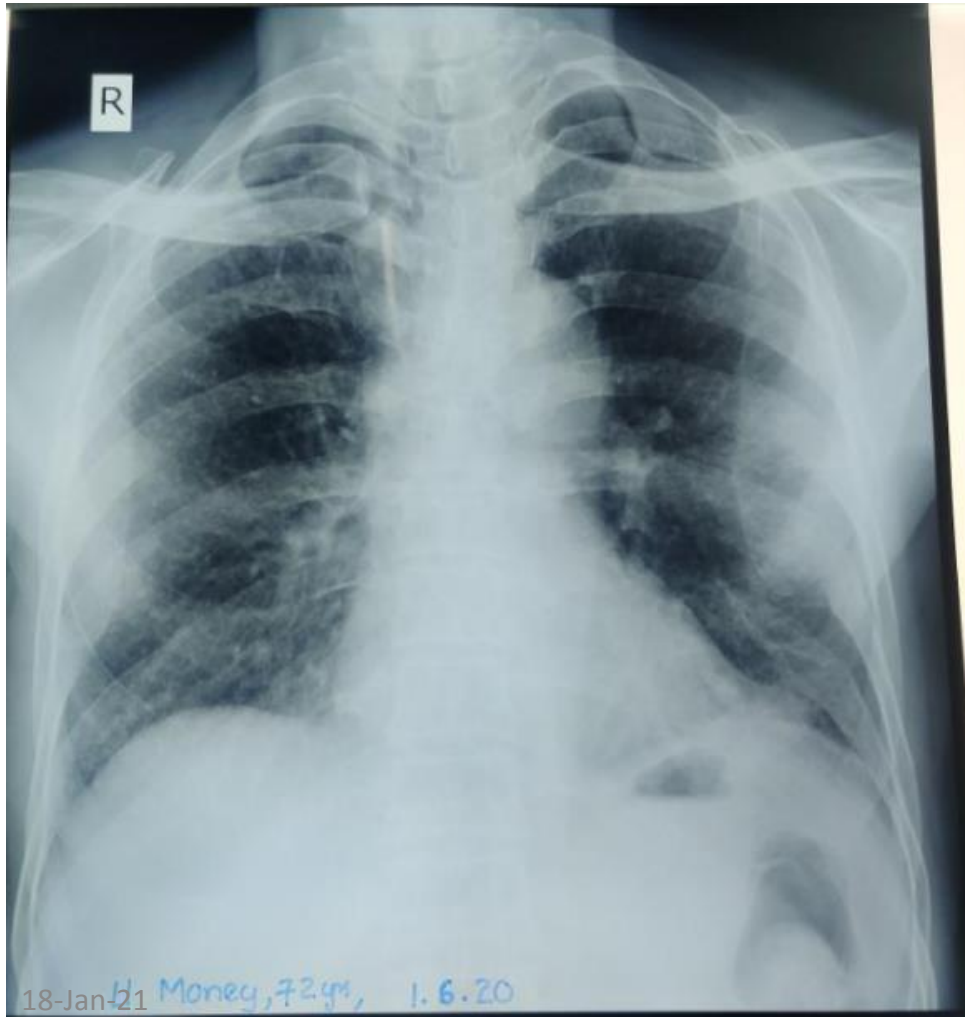
VTE = venous thromboembolism.

Case 3

- 72yr old Male returned from 20.2.2020 to 24.5.2020 India. Arrived to Yangon on 24.5.2020 presenting asymptomatic
- Admitted on 30.5.2020
- Severe headache with vomiting on 5th post admission .
- Dyspnoea with bradycardia (HR- 44 to 64/min) and high BP -160,100 mmHg also +.
- ECG – normal, no ST, T changes. QTc-417.
- Neuromedical consultants advised to do CT head with contrast.
- Thanks for Neruomedical Team and Radiological Team.

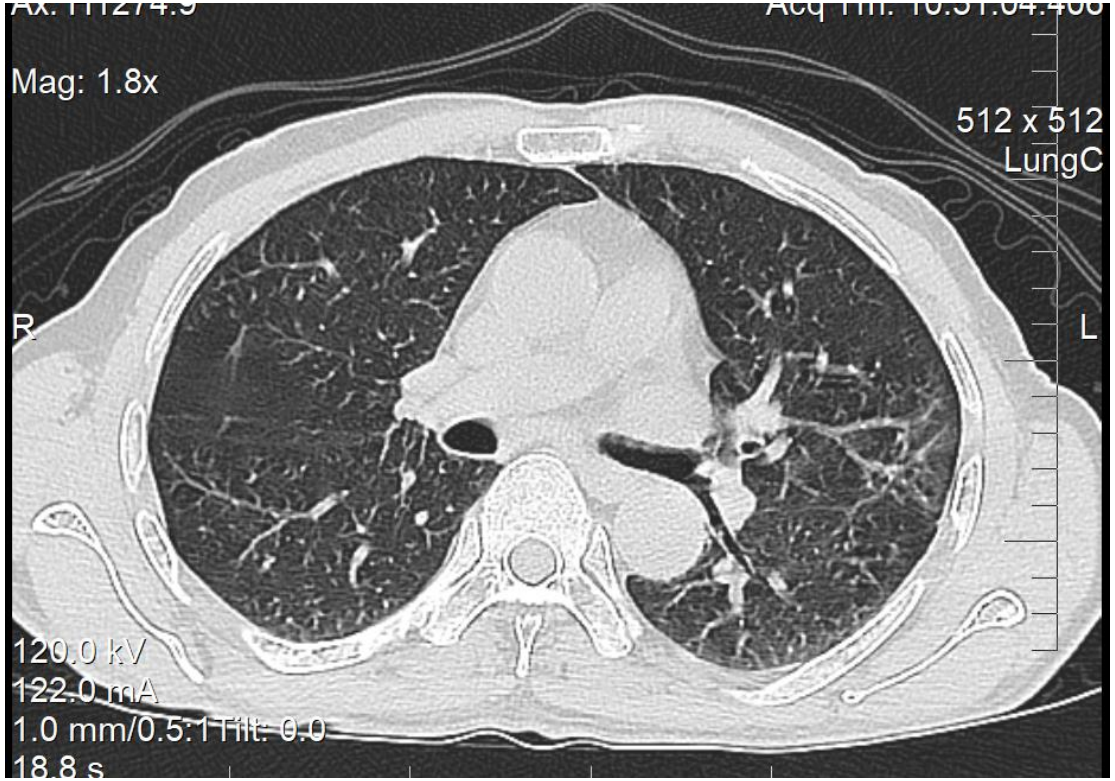
Case 3

CXR 1.6.2020 (Basal Pneumonitis)



CT Scan chest 2.6.20

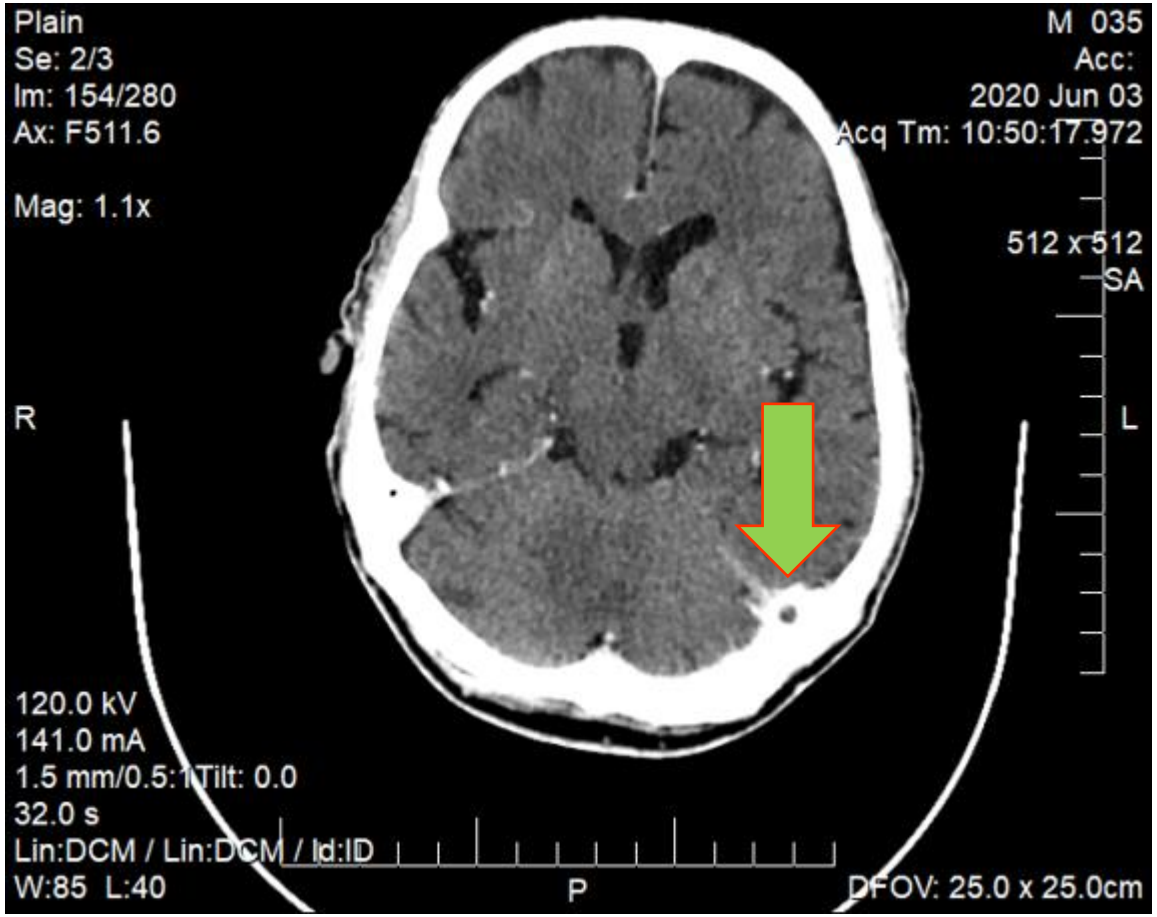
(Early Stage of COVID-19, severity scoring 7)

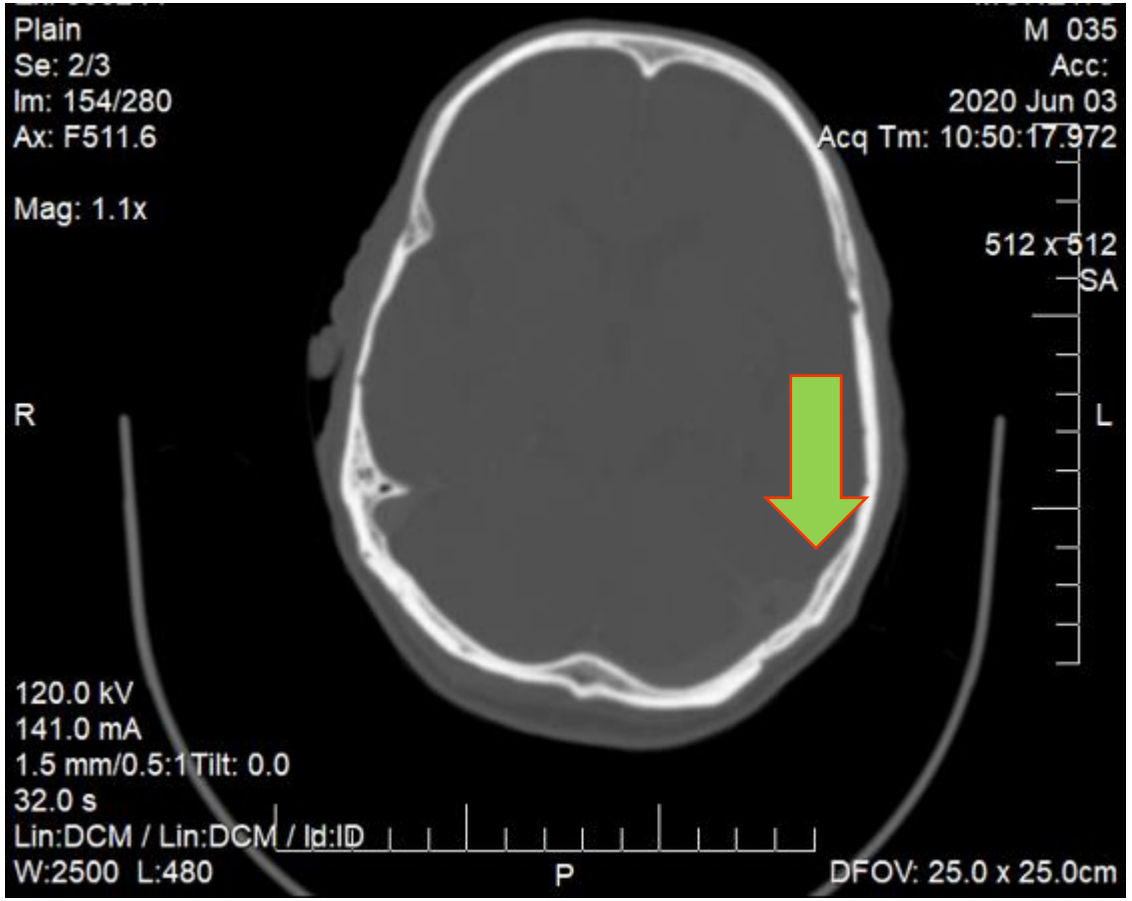


Case 3

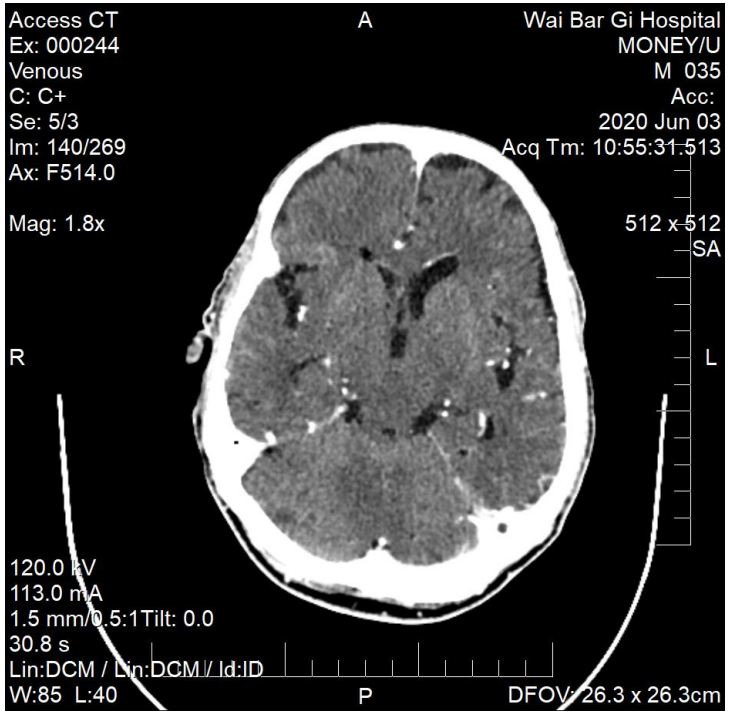
Date	Hb	Neu:	Lymphocyte	Platelet	Creatinine	LDH	Trop T	Ferritin	Procalcitonin	PT	D-dimer	CRP
3.6.2020	13.5	2.95	2	186	1.2	148	10.84	479	<0.1	13.4	552	<5
5.6.2020	13.8	2.81	2.06	210	1.1	131	10.48	11.7	<0.1	13.5	25	<5
7.6.2020	13.6	2.46	1.3	211	1.1	162.1			0.1	13.1	25	<5
9.6.2020	13	4.99	1.32	169	67	190.7					215	
17.6.2020	12.3	7.32	0.91	264	1	145	8.3	420.5	<0.1	13.9	559	<5
24.6.2020	12.8	5.38	1.36	282	0.9	130		266.3	<0.1	12.4	130	<5
30.6.2020								1.83		21.2		
2.7.2020	13.8	2.12	1.21	221	1.5	182	7.57	310.1	<0.1	20.3	300	5.5

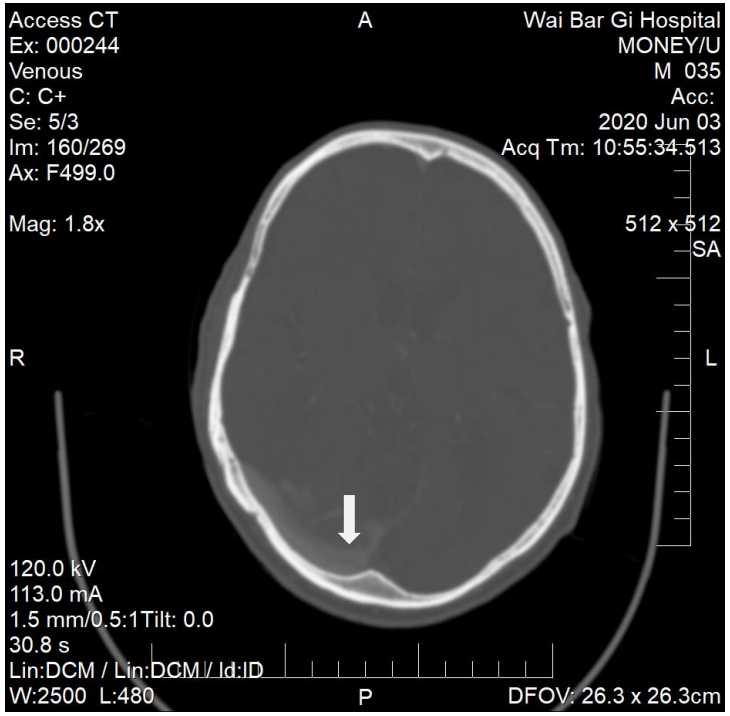
(Venous Sinus Thrombosis) Transverse Sinus

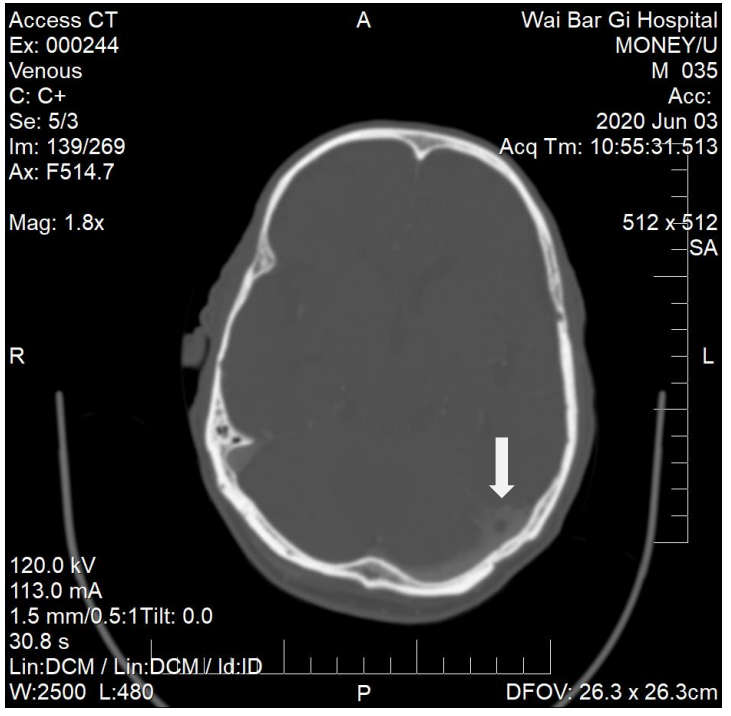




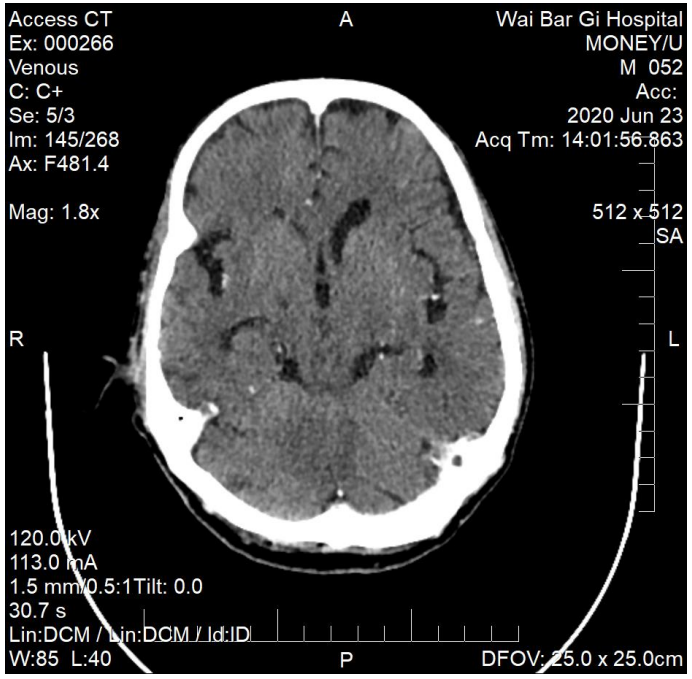
(3.6.2020)Bilateral transverse sinus thrombosis

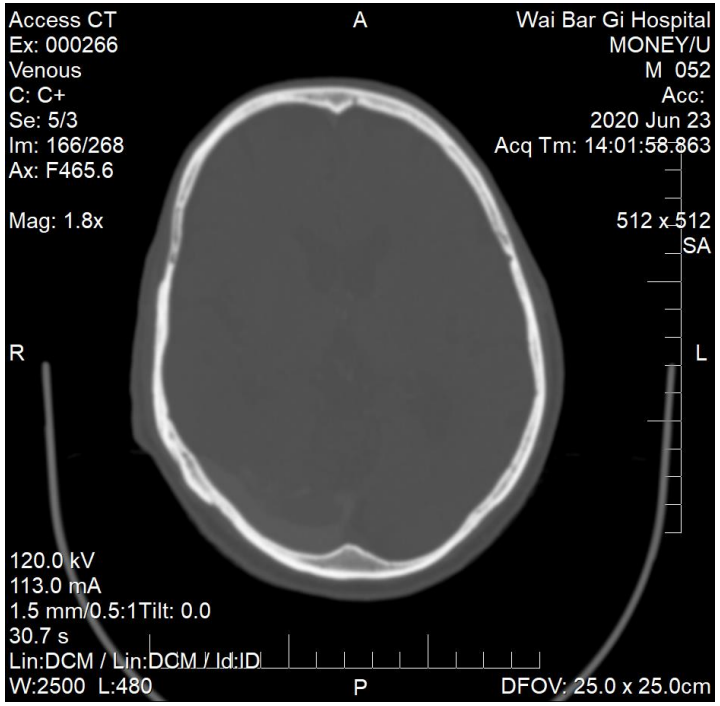


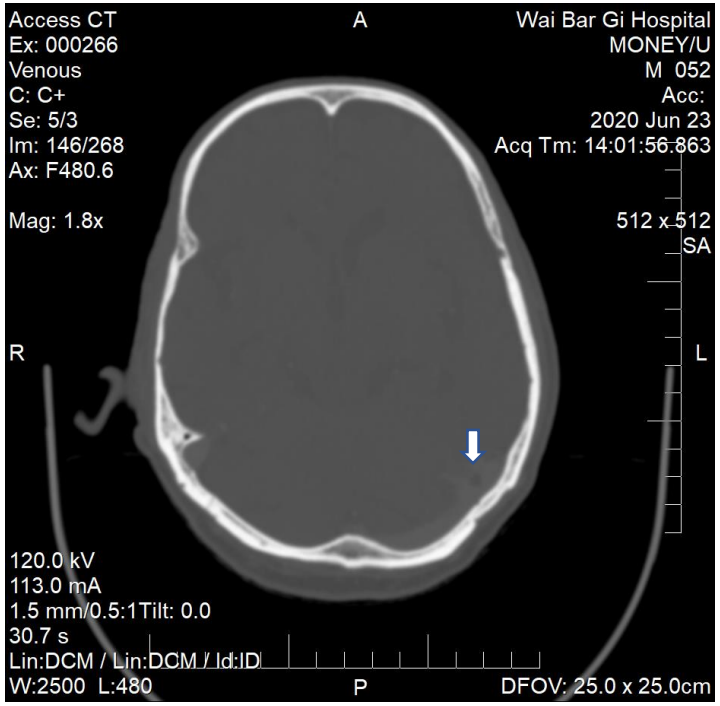




(23.6.2020) Resolving transverse sinus thrombosis







Case 3

- O2 therapy – 5 L/min for 5 days.
- Convalescent plasma 2 units were given on 3.6.2020 and 4.6.2020.
- Enoxaprin was given 3 weeks.
- New oral coagulant (Rivaroxaban) 15 mg BD x 2 wk followed by 20 mg OD x 10 wk
- Total hospital stay – 42 days.

Case 4

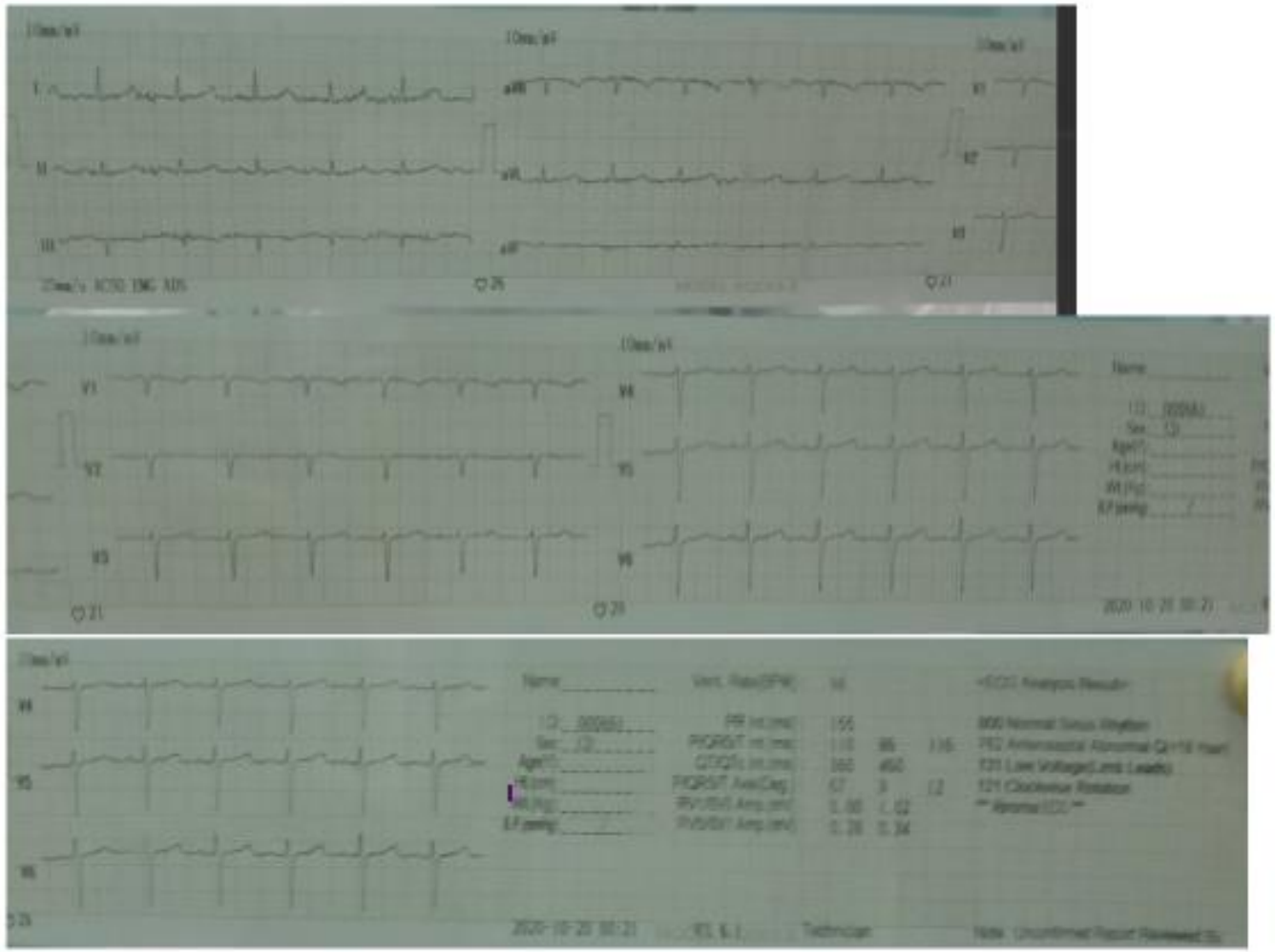
- 63 years old male, admitted on 19.10.2020
- Referred from INYA center for reduced SpO2
- Sudden onset of both lower limb weakness with skin color change at 10 am/18.10.2020
- Cough +
- Dyspnoea on exertion +
- Hypertension for 20 years, controlled DM for 15 years

Examination

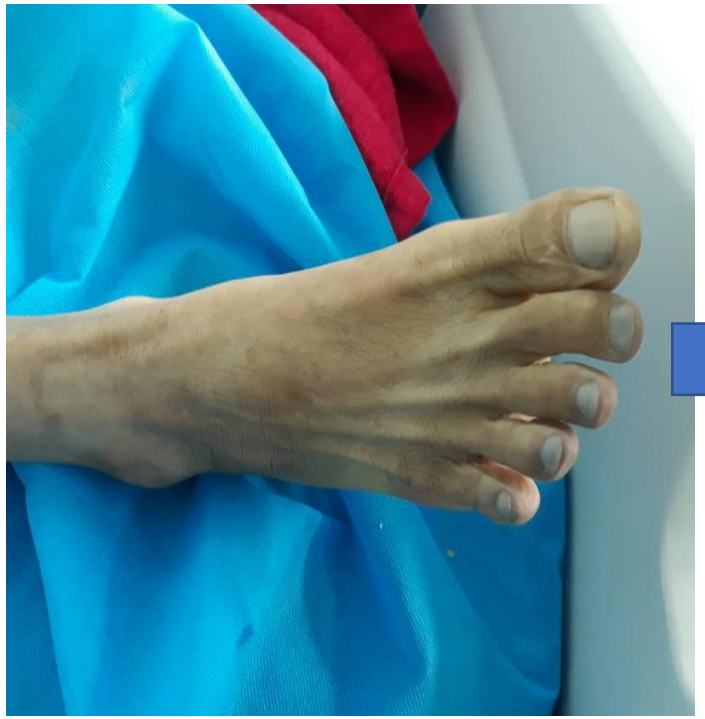
On arrival,

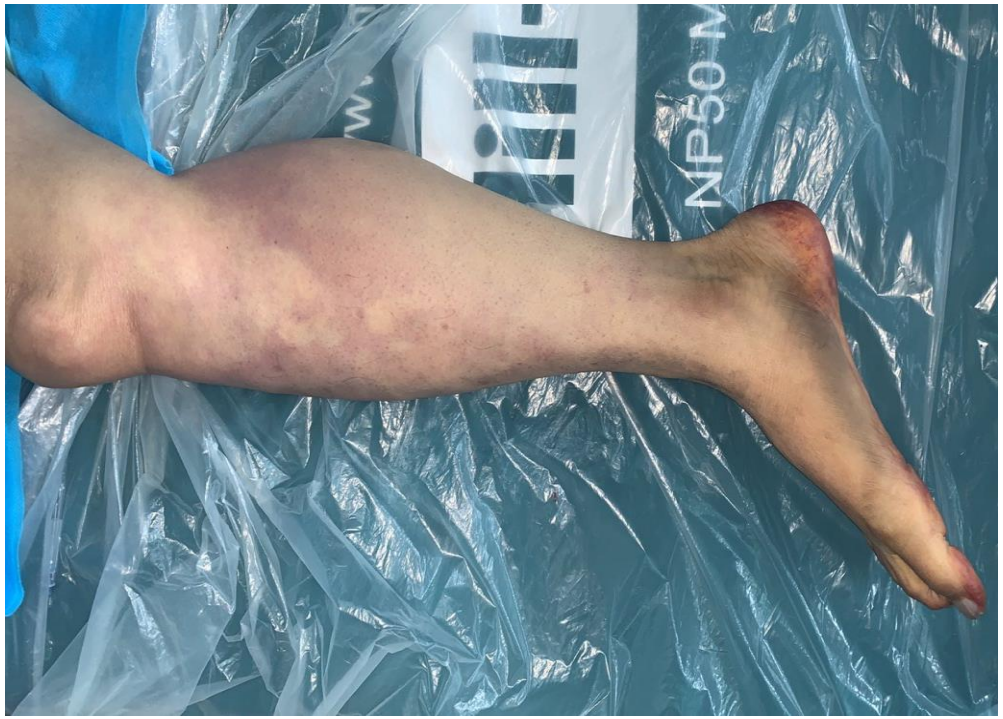
- GCS-15/15
- T- Normal
- BP- 156/94 mmHg
- PR- 106/min
- SPO2- 98%on reservoir bag (10L/min)
- RR- 20/min
- Respiratory distress (-)
- LL oedema (-)
- CNS – power -0/5 in both lower limbs, bilateral equivocal plantor response, sensory level – T10 , patchy red discoloration at left leg
- Femoral pulse, popliteal pulse, dorsalis pedis pulse – absent on both sides

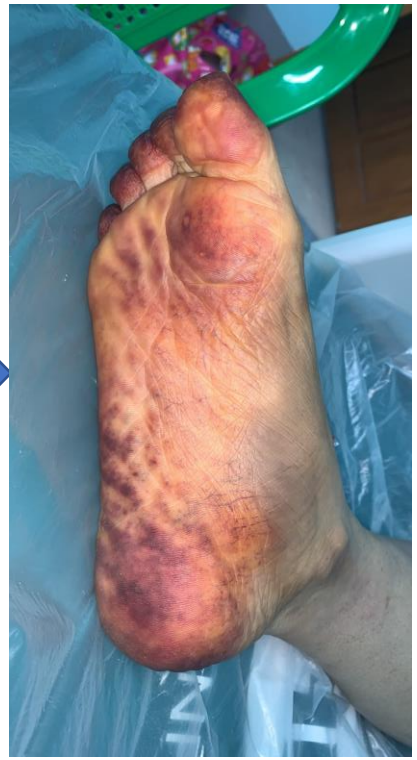
Investigation



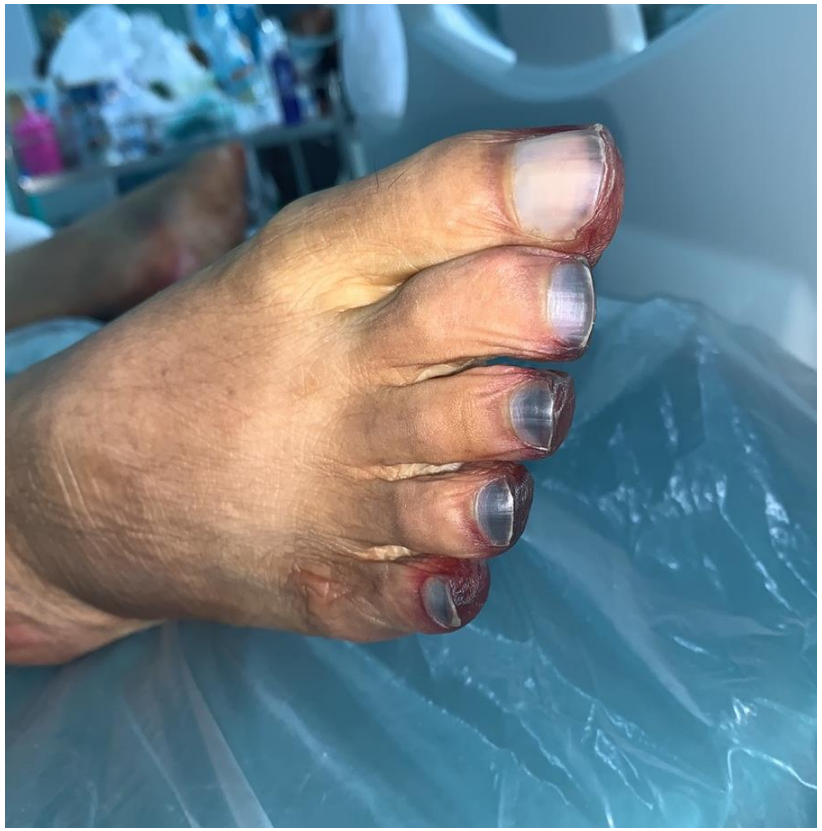
Case 4

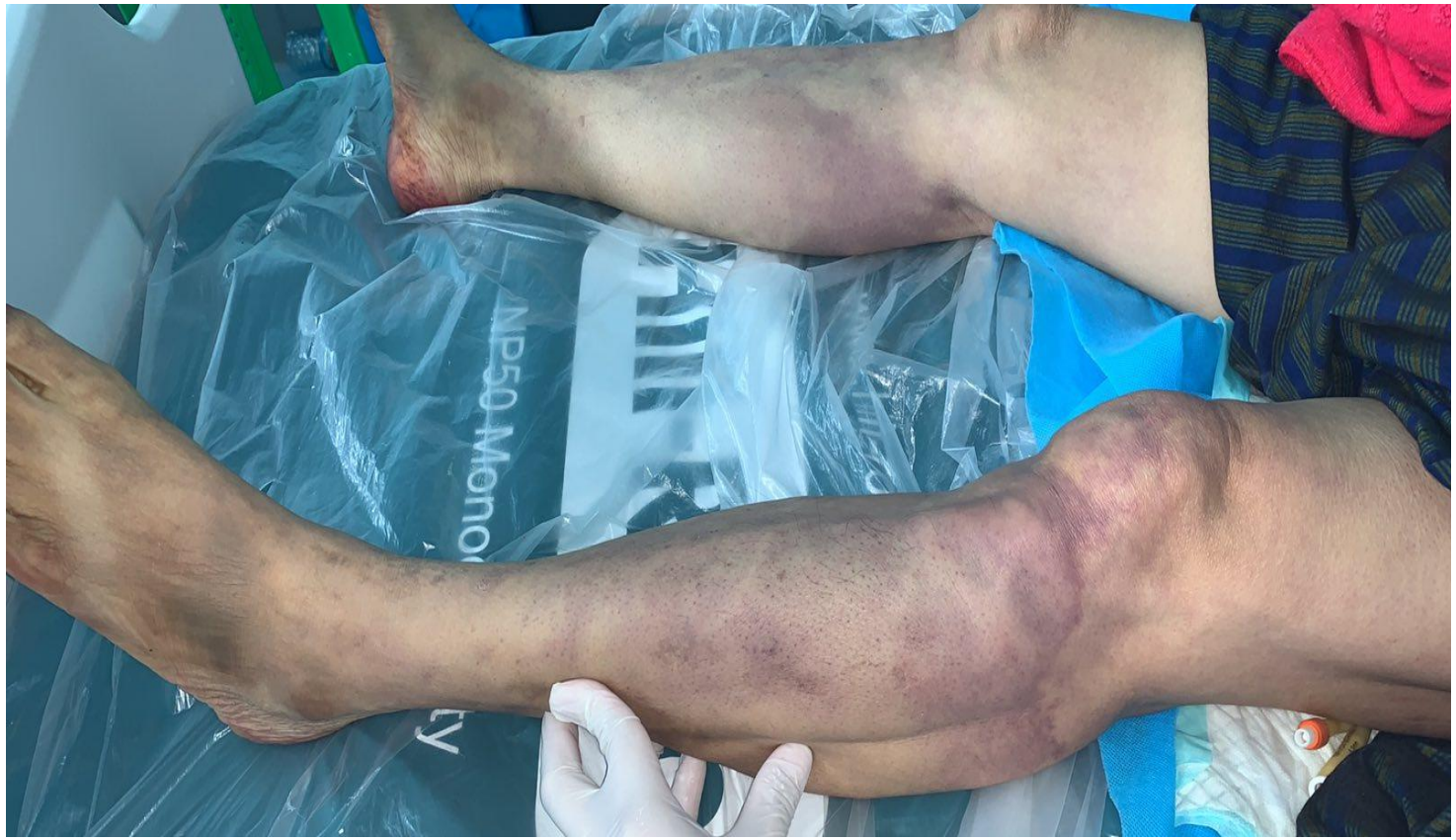




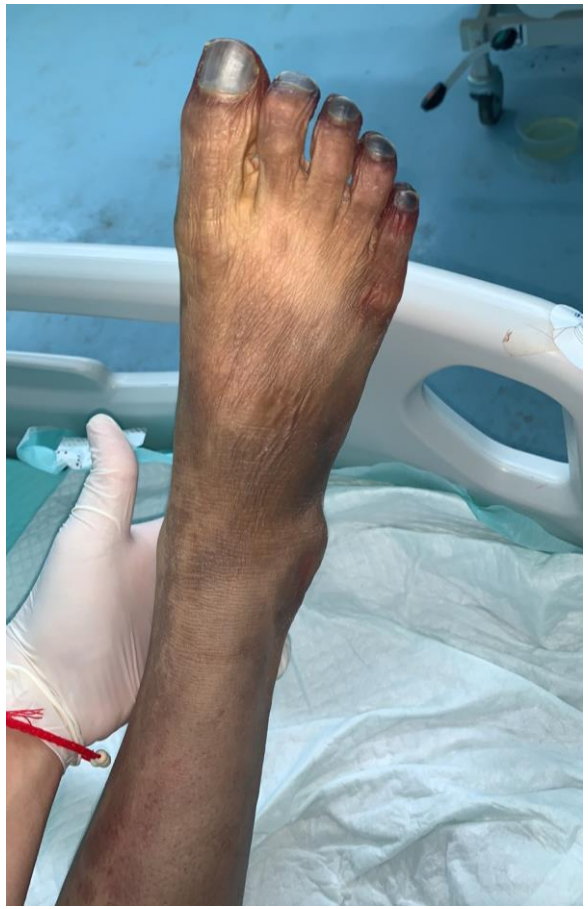


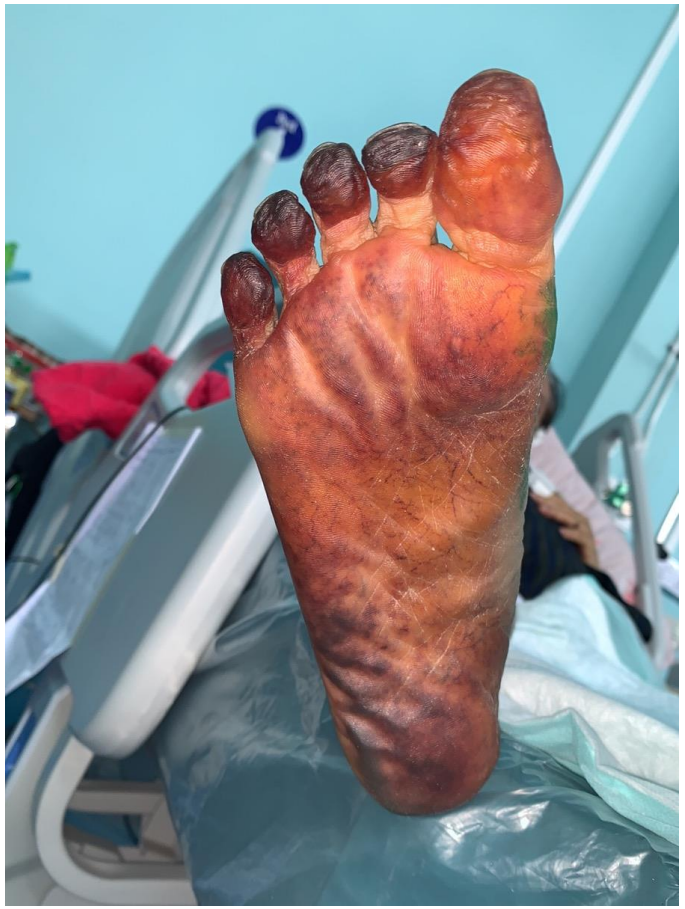
Case 4

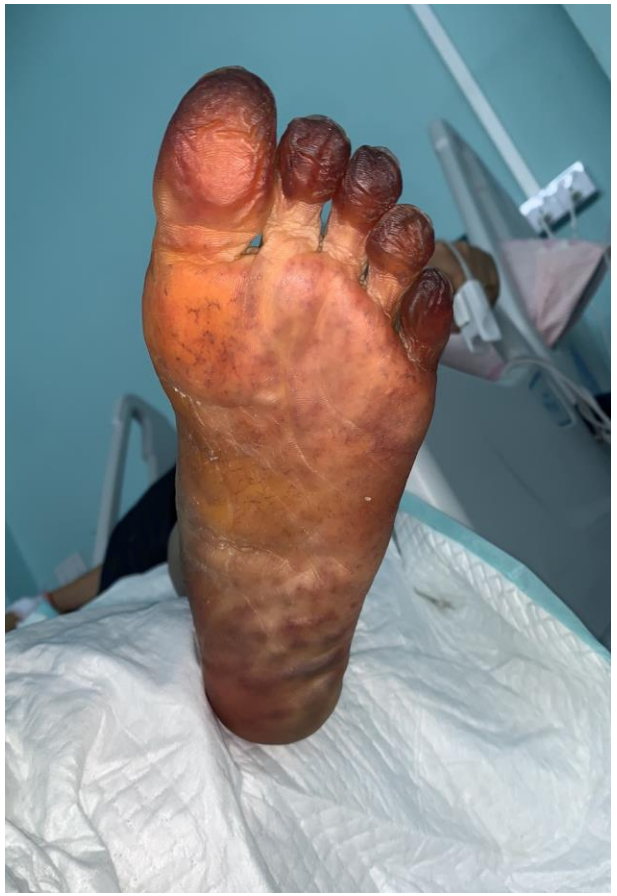




Case 4

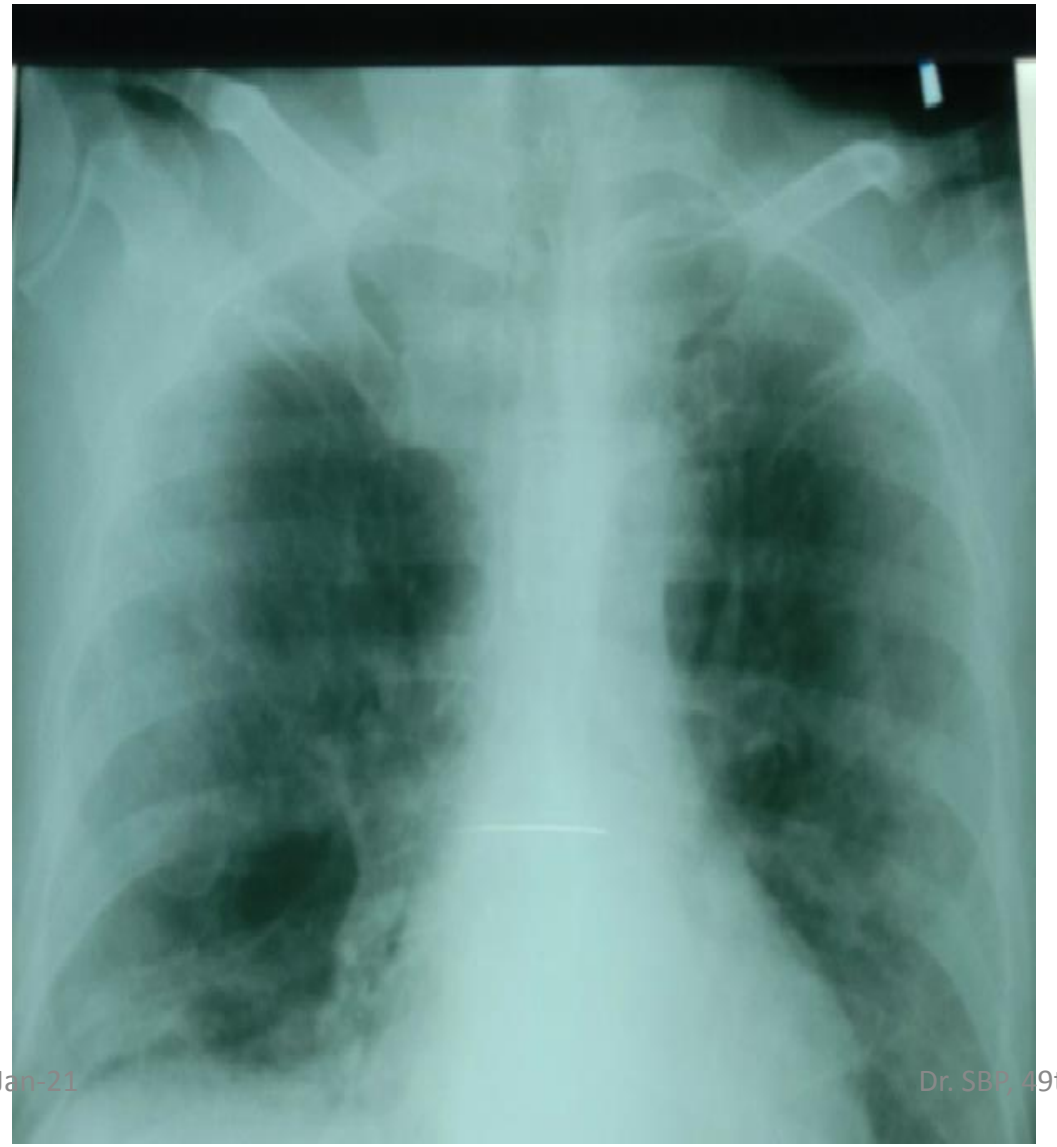






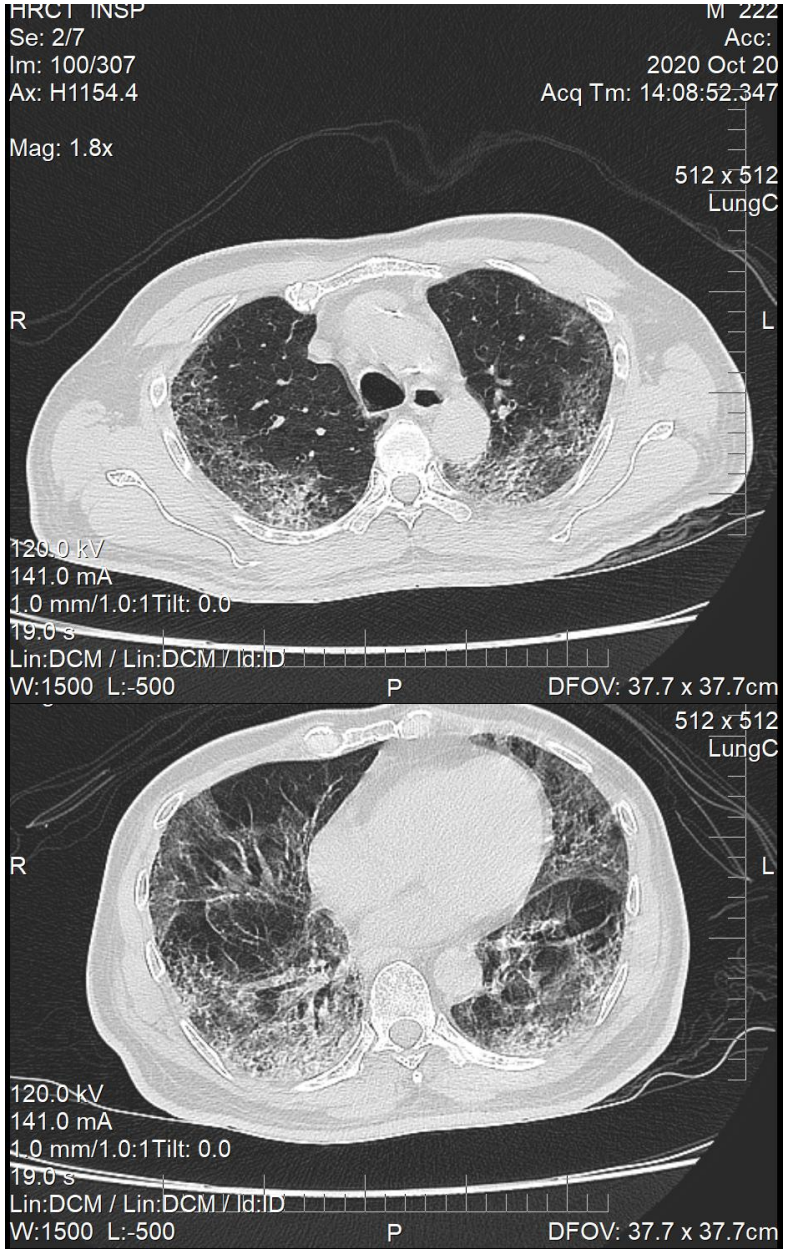
CXR on 20.10.2020

Bilateral multiple peripheral & basal consolidation.



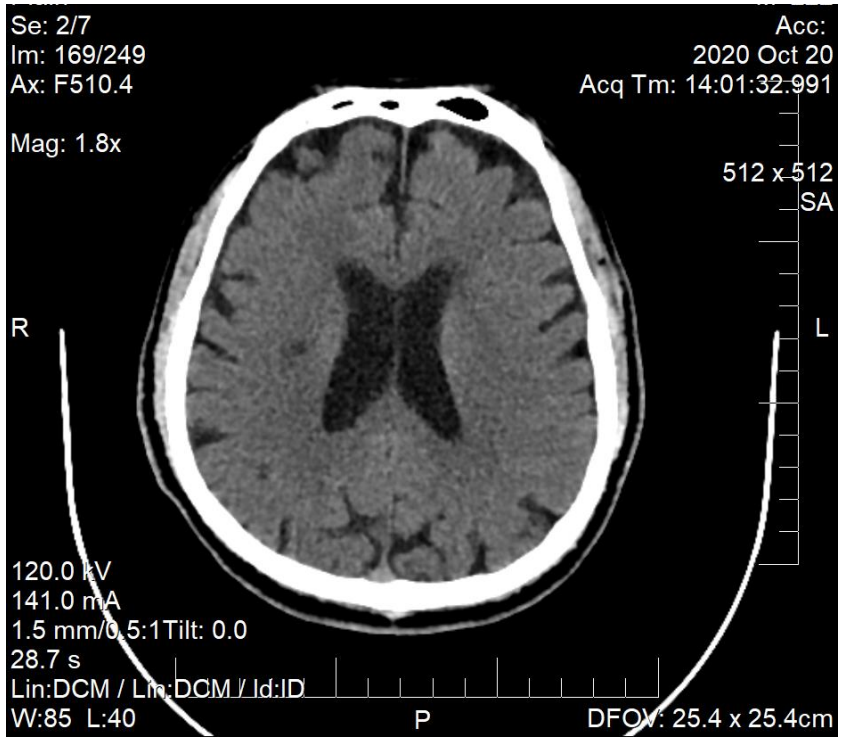
Chest CT on 20.10.2020

Advanced stage, CT score - 12

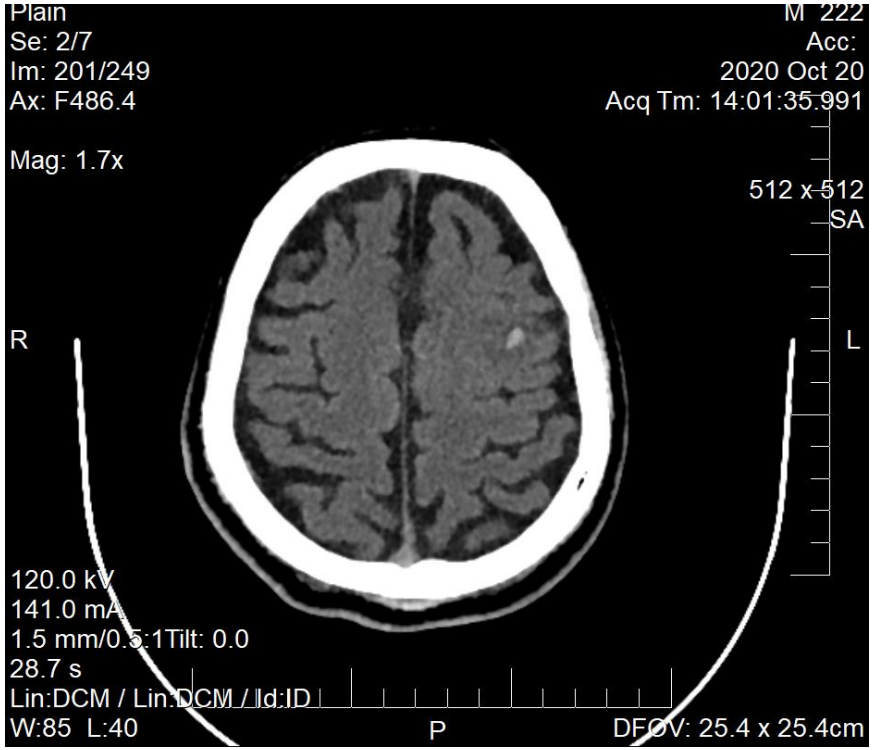


Case 4

- Acute lacunar infarction
- (Right corona radiata)



- Small ICH
- (Left parietal region)



Case 4

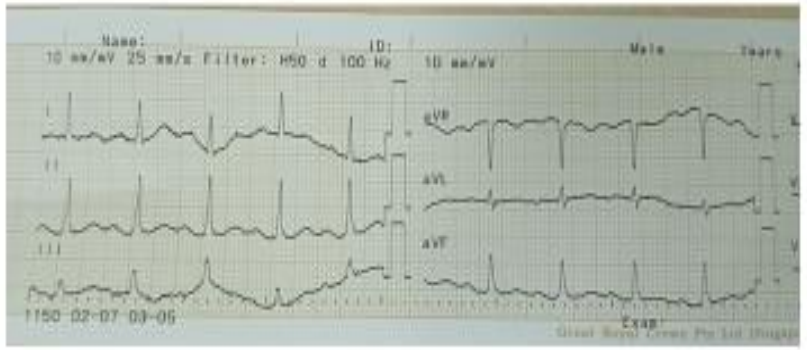
Date	Hb	Neu:	Lymphocyte	Platelet	Creatinine	TBilirubin	ALP	ALT	AST	PT	D-dimer	CRP
22/10	**15**	**23.56**	**0.91**	**261**	**1.3**	**0.95**	**857**	**292**	**242**	**12.6**	**>5000**	**37.1**
24/10	**14.1**	**20.71**	**0.88**	**250**	**1.6**	**1.34**	**446**	**321**	**224**			**57.6**
28/10	**12.8**	**22.23**	**0.67**	**149**	**1.2**	**1.25**	**228**	**164**	**88**	**16.2**	**5140**	**118.7**
4/11	**12.4**	**11.53**	**1.09**	**151**	**1.4**	**0.98**	**606**	**89**	**110**	**12.8**	**4073**	**<5**

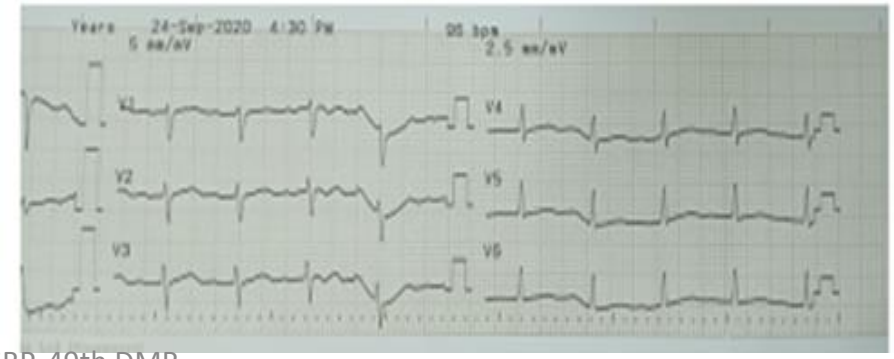
Case 4

- Cardiac surgical consultation and Ortho-surgeon consultation was done since admission.
- opinion- Bilateral acute ischaemic limbs may be extending to abdominal aorta.
- O2 therapy – 10 L/min with reservoir bag for 9 days, then switch to high flow nasal cannula 50 L/min due to severe distress for 4 days then 40 L/min for 1 day, then 25 L/min for 2 days, then 20 L/min with reservoir bag for 5 days, then 10 L/min with face mask.
- Convalescent plasma therapy 2 units were given on 20.10.2020 and 21.10.2020.
- Enoxaprin 0.6 cc bd for 3 weeks. Fondaprinux 7.5 mg/0.6 ml od for 3 days (given by cardiac surgeon)
- ICU stay for about 21 days, then refer to NOGH Orthopedic department.
- Thanks for Cardiac Surgical Team and Orthopedic Surgical Team.

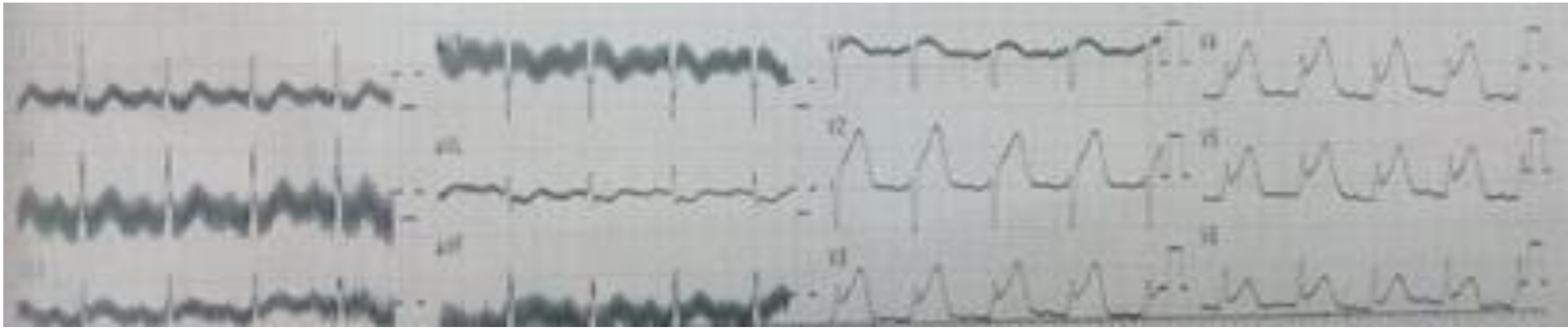
Case 5

- 69 yrs old, male
- complaint of Fever (+) for 1 week , Cough (+) for 1week
- Dyspnoea for 2 days -> SPO2 90% on 10L RB at 23.9.20
- Date of Admission - 24.9.20
- He had PMH of Myasthesia for 1yr & Hypetension for 1yr, DM (+)
- Regular taking drugs are Metformin 1 OD, Pyridostigmine 30mg 2 tds, Amlong 5mg 1 OD, Thymidime 75mg OD.
- To consulted the ICU team.
- On admission ECG

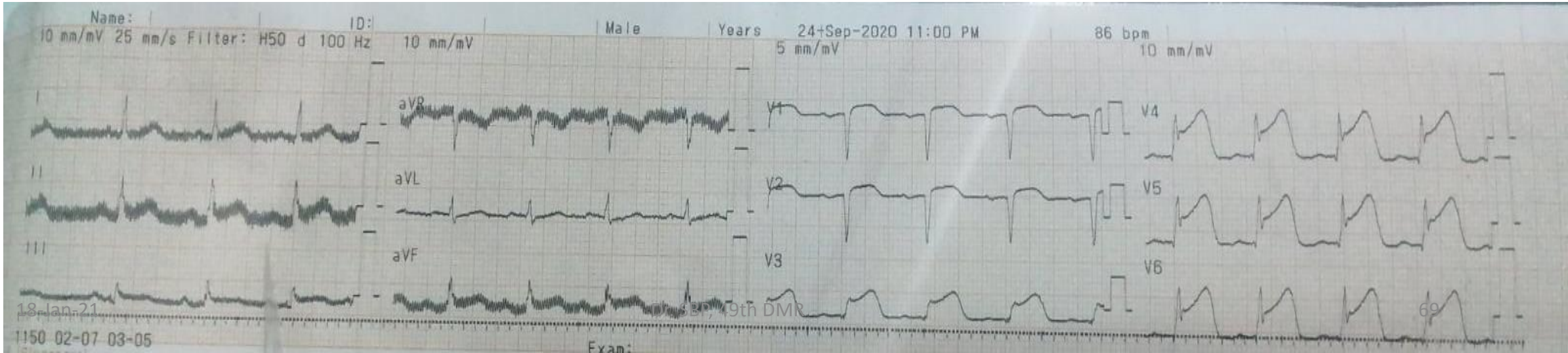


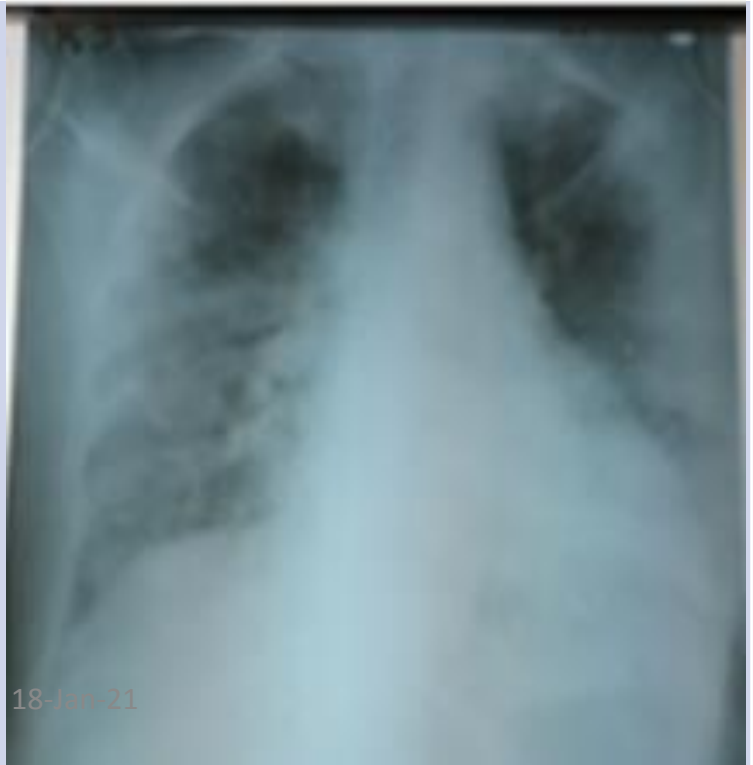
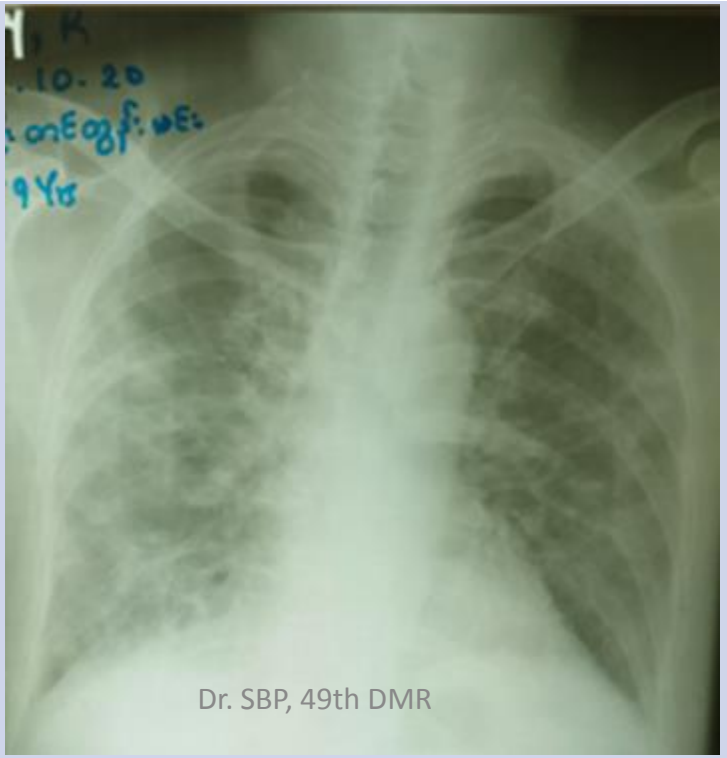


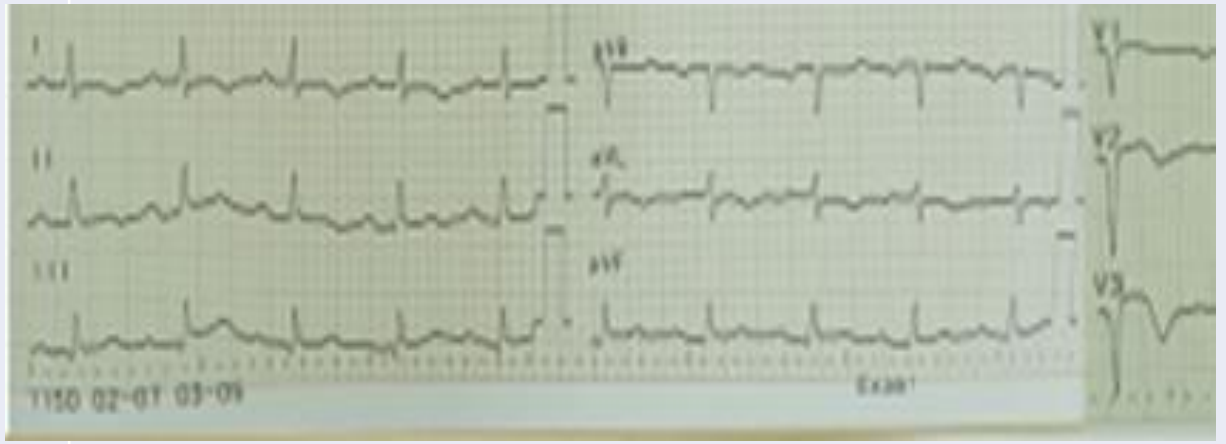
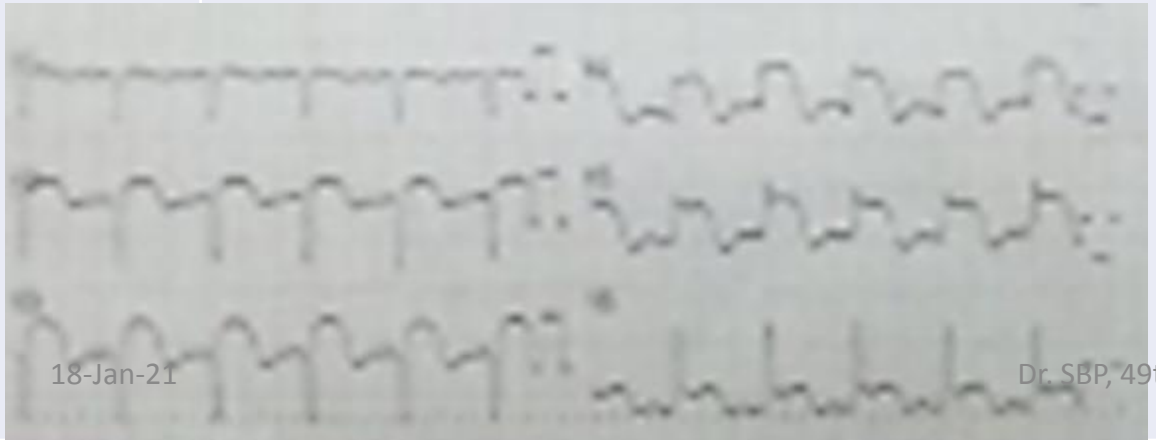
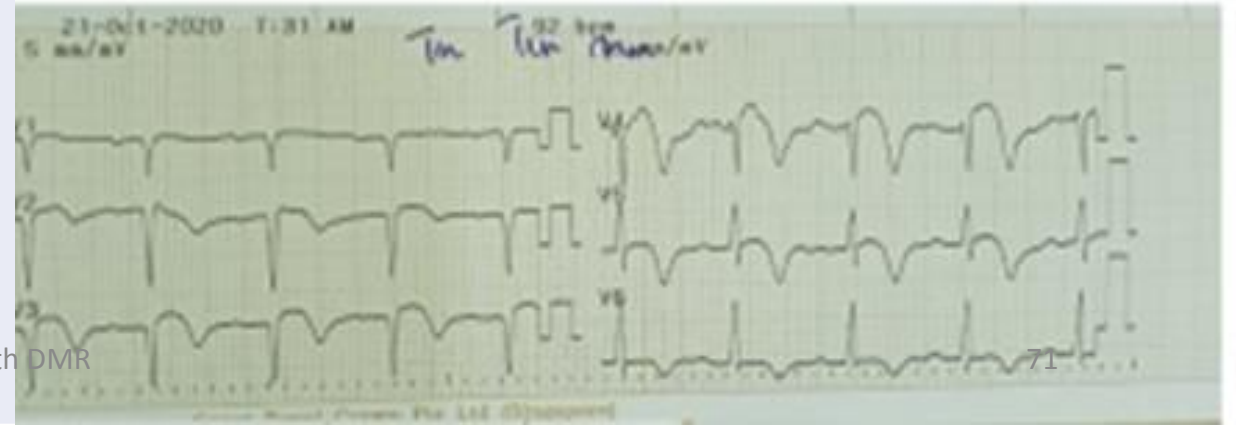
Before thrombolysis 24.9.2020



After thromboysis 24.9.2020



/s onset	24.9.20 (7th day)	28.9.20 (11th day) Actemra given	5.10.20 (18th day)
SpO2	89%	93%	98%
O2 r	10L RB & 5L NP	10L FM RB	3L NP
N	11.41	12.74	2.65
L	0.88	0.69	0.46
CRP	159.2	150	5.1
D dimer	4270.9	6800	1212
CXR			

/s onset	25.9.20 (8h day)	28.9.20 (11th day)	18.10.20 (32nd day)
SpO2	89%	93%	98%
O2 r	10RB & 5L NP	10L FM RB	2L NP
Top T	8387	1872	
ECG			
			

Date	Hb	Neu:	Lymphocyte	Platelet	Creatinine	LDH	Trop T	Ferritin	AST	PT	D-dimer	CRP
25.9.2020	11.1	11.41	0.88	308	1.8	1066		63.4	293	17	4270	159.2
27.9.2020	10.4	12.74	0.89	287	1.4		8387	131.3	183	15.4	6800	181.9
29.9.2020	11.1	6.57	0.69	271	1.6		1872	192.6	104			150
8.10.20	11.2	2.65	0.46	214	1.9			163	42			5.1
15.10.20	11	5.7	0.67	193								<5
19.10.20	11.6	4.92	1.54	202	1.7	324			26	10.1	1212	<5

Case 5

Treatment prescribed by Cardiac Physician.

24.9.2020

- I.V dexa (10Days)
- SC insulin mixtard M-12U, E-6U → latest being M-28U, E-16U
- IV streptokinase + NS 100ml over 1 hour stat
- IV morphine 3mg –3mg –2mg stat
- PO atorvastatin 20mg HS → 40mg HS (25/9)
- PO aspilet 4 stat and 1 OD

25.9.2020

- IV enoxaparin 0.4ml BD
- PO clopilet 4 stat and 1 OD
- IVI Remdesivir 200mg + NS 250cc over 2 hour followed by 100mg x 5 days
- IVI KCl 40mmol + NS 500cc stat
- PO monotrate 10mg OD

26.9.2020

- PO slow K 2 TDS

18.10.2020

- PO bisoprolol 2.5mg OD
- PO Carvedilol 3.125mg BD

Case 5

- Oxygen Therapy Started on 10L RB for 9days, 5L for 4days and then 2L for 5days.
- ICU stayed for 14days and hospital stayed for 28days.
- Consulted the Cardiac medical team further management .

- Thanks for Waibargi Medical Team, ICU Team and Cardiac Medical Team.

Echo on 18.10.2020

Thrombolysed extensive anterior STEMI

Echo: Normal LV size. Anterior, septal and apical wall hypokinesia. Mild LV systolic dysfunction. LVEF is 45%. Mild MR. Trivial TR. Normal LA volume. No obvious thrombus. No pulmonary hypertension. No pericardial effusion.

In Future

- Our Expectation is National One Stop COVID-19 Center with international standards.

Take home Message

- We thoroughly don’t know virus behavior.
- 80% of COVID-19 cases are mild while 15% cases can be severe and about 5% progress to critical condition.
- In hospital setting, late case presentation and need ICU care and oxygen consumption.
- CT scan is sensitive to detect the severity of the disease.
- We cannot definitely diagnosed COVID-19 related coagulopathy and cytokine storm.
- Share the real time accurate information of COVID-19 by participating health personal .

Thank So Much