A Case Presentation

Dr. Gökhan VATANSEVER

- A-26-year old male patient
- Hardware store employee
- Lives in an urban area,

  single, no children

History of Presenting Illness

- A 26-year-old patient presented to our clinic with a 2-day history of fever, fatigue, sore throat and generalised muscle pain.

- The patient had presented to the emergency department of Manisa District Hospital 2 days before with the same symptoms.

- He was discharged after receiving symptomatic treatment.

Past Medical History, Family and Social History

* Thalassemia minor, Hypothyroidism (diagnosed with 1.5 years ago).

* He has not taken his thyroxine for the past 6 months.

* Non-smoker, no alcohol, no pets, no known allergies, no recent hospitilisation nor travel history, no previous surgeries.

* His father has Thalassemia minor and hypothyroidism as well. His mother has Type 2 diabetes.

Systems Check

- sore throat+
- cough +
- sputum -
- muscle pain +
- loss off appetite +
- nausea -
- diarrhoea -
- constipation -
- fever +
- weight loss-
- malaise +
- weakness +
- night swears-
- pruritus -
- disuria
- head ache-

Physical Examination

- Conscious, lethargic, GCS 15.

Vitals:

- Blood Pressure: 75/48 mmHg,
- HR: 127 bpm,
- Body temperature: 39.5°C,
- On room air sats, SpO2: 90%.

- Physical exam revealed hyperemic oropharynx, pale skin and dry mouth and lips, lung auscultation → bilaterally asymmetrical coarse crackles and rhonchi.

25.03.2024-Initial Resuscitation

- ABCDE assessment
- Hemodynamically not stable and desaturated, 8 L/min O_2
- Crystalloid fluid resuscitation, FBC, U&E, LFT, CRP, arterial blood gas, blood cultures, respiratory rapid panel, D-dimer, cardiac markers and started empirical antibiotics (Piperacillin-tazobactam and Teicoplanin).
- Portable chest X-ray
- qSOFA: 2, SOFA: 11 (%50), APACHE II: 16 (23.5%)

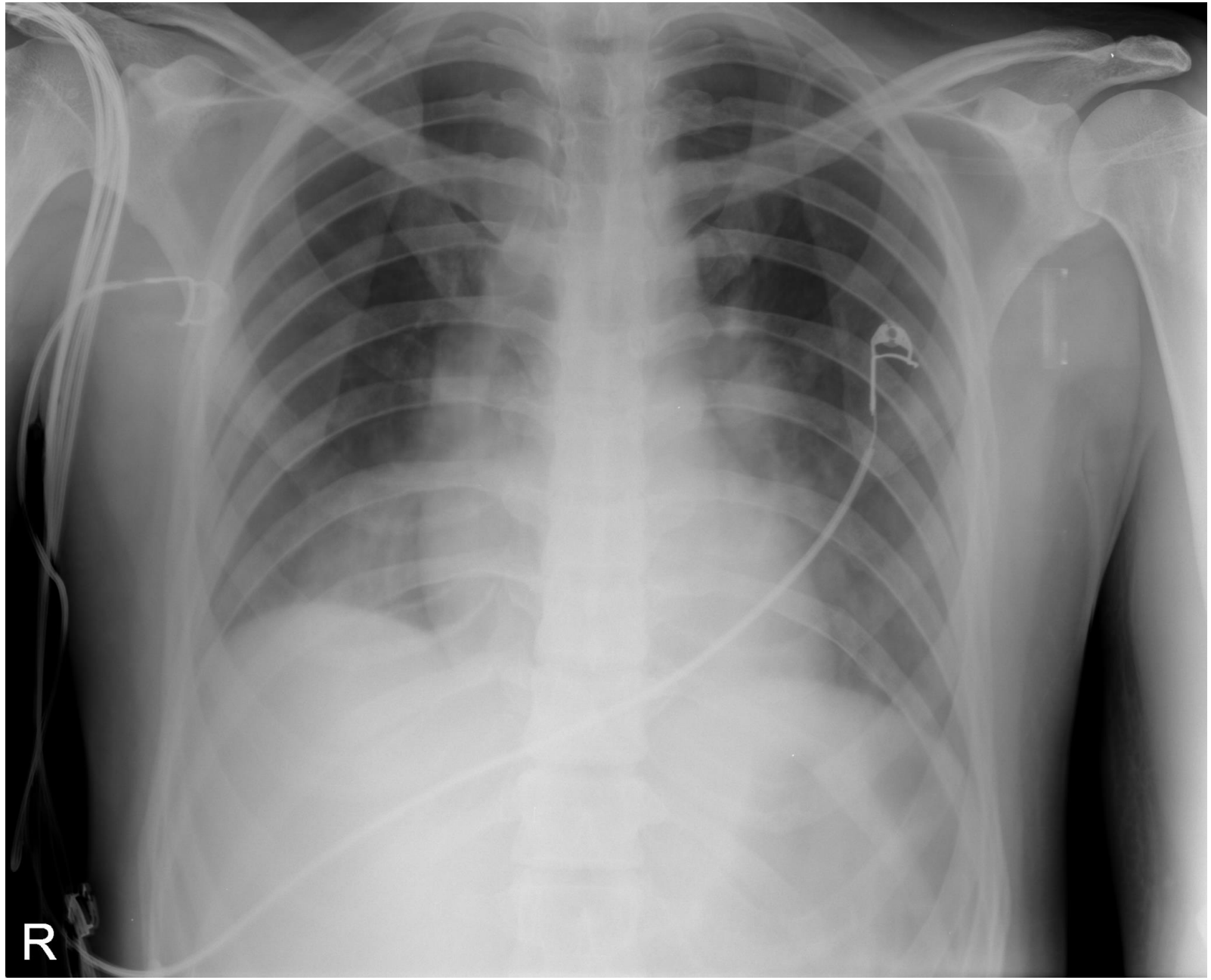
	Day 0
AST/ALT (U/L)	77/41
T.protein/albumin (g/L)	47/29
Glucose (mg/dL)	107
Urea (mg/dL)	65
Creatinine (mg/dL)	3,5
CRP (mg/L)	263
Procalcitonin (µg/L)	72,3
Sedimentation-1 h	36
Ferritin (µg/L)	863
INR	2,5
APTT (s)	52,4
Fibrinogen (mg/dL)	531
D-dimer (µg/L)	1810

Leucocyte (10^3/µL)	3930
Neutrophil (%)	53
Lymphocyte (%)	33
Monocyte (%)	9
Hb g/dL	11
Platelet /µL	144,000

Slightly raised liver enzymes

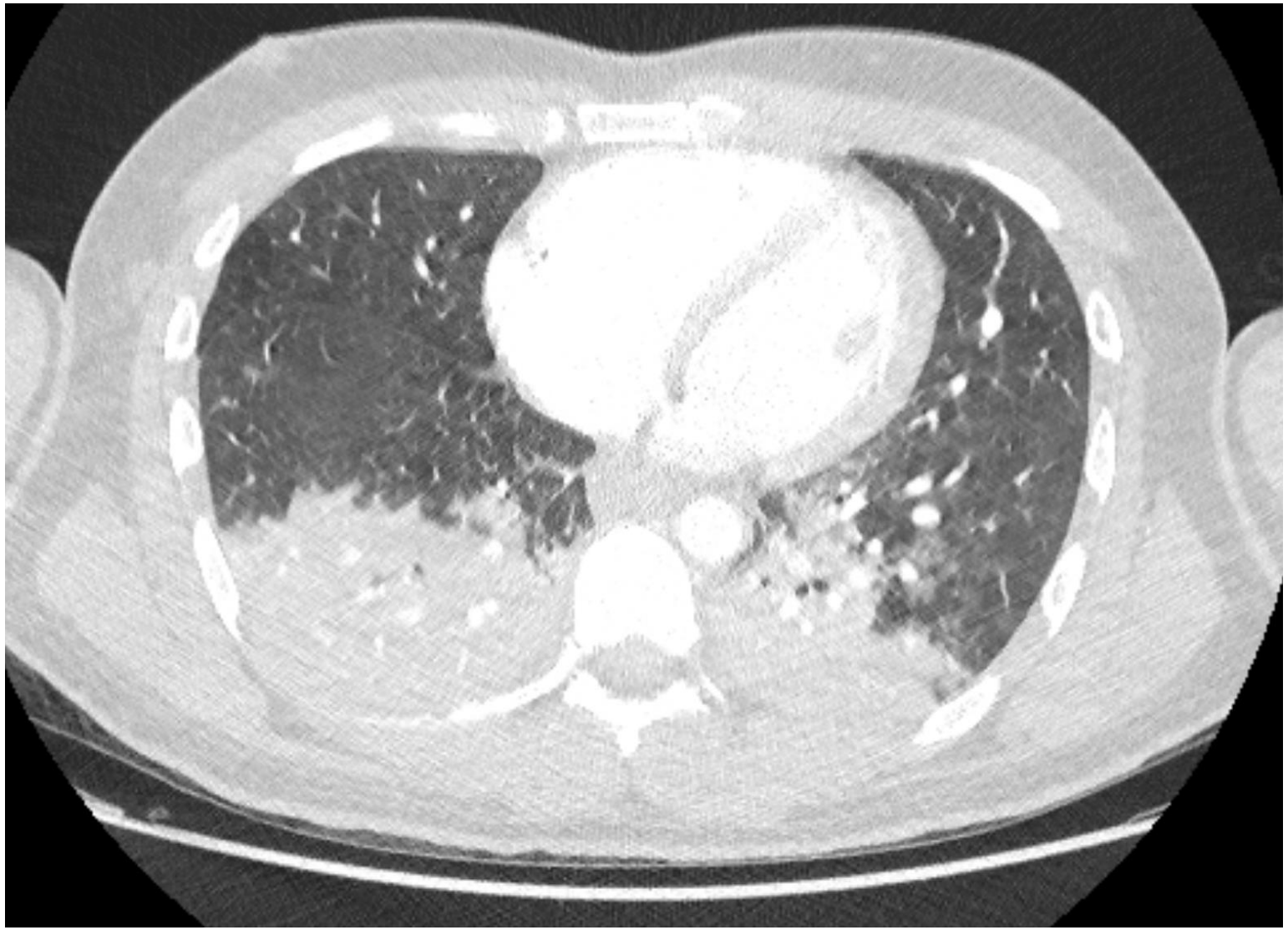
Increased creatinine levels → AKI

Increased INR and prolonged APTT


R

2-6 Hours from Admission

- Referral to Pulmonology, Cardiology and Anesthesiology.
- Patient was transferred to Anesthesiology ICU shortly after.
- His ECG showed sinus tachycardia, low amplitude QRS complexes, incomplete right bundle branch block. TTE showed mild right ventricular strain → PTE?
- Requesrted Thorax Angio CT and a CT scan of the neck.
- Persistent arterial hypotension continued: Inotropic support (norepinephrine 0.4 mcg/kg/min).
- Respiratory panel: Influenza B positive → Oseltamivir initiated.



Consolidation areas accompanied by air bronchograms in the bilateral lung parenchyma in the lower lobes → in favour of pneumonic processes. No PTE.

48 Hours from Admission

- Non-febrile
- His respiratory condition deteriorated, metabolic acidosis progressed → intubation and MV support (PCV mode, FiO_2: %40).
- IVIG treatment for 5 days started.
- No growth in cultures: Blood, urine, deep tracheal aspirate.

Day 7 of Hospitilisation

- On day 7, he was hemodynamically stable without vasopressor support.
- He was fully conscious, alert and oriented.
- Self-extubated, tolerated T-tube (5 L/min O_2).
- No growth in cultures: blood, urine, deep tracheal aspirate.

	Day 7
AST/ALT (U/L)	186/472
T.protein/albumin	85/26
Glucose (mg/dL)	103
Urea (mg/dL)	53
Creatinine (mg/dL)	1,57
CRP (mg/L)	80,6
Procalcitonin (µg/L)	1,22
Sedimentation-1 h	45
Ferritin (µg/L)	765
INR	1,67
APTT (s)	25,3
Fibrinogen (mg/dL)	577
D-dimer (µg/L)	1247

Leucocyte (10^3/µL)	17560
Neutrophil (%)	78,4
Lymphocyte (%)	14,9
Monocyte (%)	6,7
Hb g/dL	8,7
Platelet /µL	346,000

Day 10 of Hospitilisation

- Despite the clinical improvement overall, patient stayed still hypotensive.
- Referral to Cardiology, Echocardiography: Ejection fraction of 30%.
- His cardiac enzymes were mildly elevated. Cardiology evaluated the patient as myocarditis given the increase in troponin levels due to hypoperfusion/sepsis and/or Influenza virus?
- Differential diagnosis is almost always quite difficult.

Day 14 of Hospitilisation

- In total, the patient was monitored in the ICU for 2 weeks.
- He was in good health and had no requirement of oxygen.
- He was discharged with follow-up in Cardiology and Endocrinology outpatient clinics.

	Day 14
AST/ALT (U/L)	43/49
T.protein/albumin (g/L)	86/40
Glucose (mg/dL)	98
Urea (mg/dL)	53
Creatinine (mg/dL)	0,8
CRP (mg/L)	11,3
Procalcitonin (µg/L)	0,16
Sedimentation-1 h	97
Ferritin (µg/L)	689
INR	1,07
APTT (s)	27,7
Fibrinogen (mg/dL)	319
D-dimer (µg/L)	491

Leucocyte (10^3/µL)	5660
Neutrophil (%)	25,2
Lymphocyte (%)	55,1
Monocyte (%)	11,8
Hb g/dL	9,7
Platelet /µL	407,000

Conclusion

- Importance of comprehensive assessment and close monitoring should be always kept in mind.

- Significance of patient compliance with. treatments of chronic conditions → hypothroidism may have caused immunosuppression (impairment of pathogen clearence, chemotaxis, oxidative burst)…

- Influenza vaccine is of vital importance, especially in risk groups.

Thank you for your attention!