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Diploma in Pharmacy 2nd Year
Pharmacotherapeutics
Experiment

To Prepare and Discuss notes on Subjective, Objective, Assessment and Plan for COVID-19 (real / hypothetical)

Aim:

To Prepare and Discuss notes on Subjective, Objective, Assessment and Plan for COVID-19 (real / hypothetical)

Reference :

‘ Dr. Gupta G.D. , Dr. Sharma Shailesh, Dr. Sharma Rahul Kumar, “Practical Manual of Pharmacotherapeutics” Published by Nirali Prakashan, Page no 59 - 63

Theory :

1.COVID-19

i) Case I

a. Subjective:

- **Name:** Mr XYZ
- **Age:** 60 yrs
- **Sex:** Male
- **Unit:** MED II
- **DOA:** 02/09/2005
- **Reason for Admission:** Chief complaint with five days of fever, dry cough, and shortness of breath.
- **Past Medical History:** 06 years back diagnosed with x light-chain multiple myeloma (MM).
- **Past Medication History:** Received induction therapy with cyclophosphamide, bortezomib, and dexamethasone followed

by high-dose melphalan and autologous hematopoietic cell transplantation. At the time of admission, he was on maintenance therapy with 10 mg lenalidomide on days 1 to 21 of 28 days, and dexamethasone with no evidence of disease.

- **Family History:** No
- **Allergies and Social History**: Nil

b. Objective:

- **Height:** 5'2"
- **Weight:** 60 kg
- **PR:** 110 bpm
- **Temperature:** 102.9°F
- **BP:** 131/74 mmHg
- **RS:** 41/min
- **Oxygen Saturation:** 94%

c. Assessment:

- **Physical Examination:**
  - The patient appeared diaphoretic and in acute respiratory distress, with rapid, shallow breathing
  - Diffuse inspiratory crackles were audible throughout the bilateral lung fields.
  - Empiric broad-spectrum antibiotics were initiated, and the patient was admitted to the special pathogens unit.
  - Within 12 hours after admission, the patient developed increased respiratory distress, and rapidly escalating oxygen requirements prompted his transfer to the intensive care unit (ICU).
  - Upon arrival to the ICU, he was intubated for hypoxemic respiratory failure due to severe ARDS.

- **Laboratory Results:**

- **Laboratory Results:**

Test	Value	Range
Sodium	147 mmol/L	136-145 mmol/L
Potassium	3.6 mmol/L	3.4-5.1 mmol/L
Chloride	112 mmol/L	98-107 mmol/L
HCO3	21 mmol/L	22-31 mmol/L
Blood urea nitrogen	28 mg/dL	6-23 mg/dL
Creatinine	0.94 mg/dL	0.50-1.20 mg/dL
Calcium	8.3 mg/dL	8.8-10.7 mg/dL
Alanine aminotransferase	23 U/L	10-50 U/L
Aspartate aminotransferase	51 U/L	10-50 U/L

- **Chest X-ray:** Showed low lung volumes and bilateral atelectasis.
- **Urinary antigens:** antigens for Streptococcus pneumoniae and Legionella pneumophilia were negative
- **Polymerase chain reaction (PCR) -based respiratory viral panel:** polymerase chain reaction (PCR) -based respiratory viral panel was negative for influenza A/B, respiratory syncytial virus, adenovirus, human metapneumovirus, and parainfluenza
- **Nasopharyngeal reverse transcription-PCR for SARS-CoV-2:** Nasopharyngeal reverse transcription-PCR for SARS-CoV-2 was positive, confirming the diagnosis of COVID-19 pneumonia.

d. Plan -Treatment:

- The patient was treated with hydroxychloroquine but showed no change in his clinical status.

- Given the patient's elevated and rising serum interleukin (IL-6) level, C-reactive protein, and D-dimer, tocilizumab was administered with no appreciable clinical improvement.
- He was subsequently enrolled on a randomized clinical trial of remdesivir when it became available at our site
- After two weeks of mechanical ventilation, the patient was successfully extubated and continues to clinically improve.

ii) Case II

a) Subjective:

- **Name:** Ms XYZ
- **Age:** 24 yrs
- **Sex:** Female
- **Unit:** MED II
- **DOA:** 21/01/2020
- **Reason for Admission:** Chief complaint with a ten-day history of fever and dry cough. She also presented nonspecific symptoms, such as abdominal pain and diarrhea. And five days later experienced chest pain.
- **Past Medical History:** Nil
- **Past Medication History:** Nil
- **Family History:** No
- **Allergies and Social History:** Nil

b) Objective:

- **Height:** 5'1"
- **Weight:** 54 kg
- **BP:** 116/73 mmHg
- **PR:** 78 bpm
- **RS**: 19/min
- **Temperature:** Febrile

- **Oxygen Saturation:** 94%

c) Assessment - Physical Examination:

- **Reverse Transcription-PCR for COVID-19**

- **Reverse Transcription-PCR for COVID-19**

	Date		
Assay	28-Jan	5-Feb	9-Feb
Positive	+		
Negative		-	-

- **Routine Blood Test:**

- **Routine Blood Test:**

Index	Date		
	21-Jan	28-Jan	3-Feb
WBC (5.2×10^9/L)	5.2	4.8	5.7
LYM (1.12×10^9/L)	1.12	2.13	2.31
LYM (%)	21.6	44.5	40.6
NEUT (%)	76.31	47.4	51.4
CRP (mg/L)	2.83	< 3.14	< 3.14
Liver and kidney function	normal	normal	normal
Troponin (ng/mL)	-	< 0.003	< 0.003
LDH (U/L)	-	165	133
PCT (ng/mL)	-	0.03	0.02
Pulse oxygen saturation (%)	-	-	99

WBC: White Blood Cells, LYM: Lymphocytes; NEUT: Neutrophil; CRP C-Reactive Protein; LDH: Lactic Dehydrogenase, PCT: Procalcitonin.

- **Chest Computed Tomography (CT) Scan:** Revealed no obvious abnormality
- **Reverse Transcription-PCR (RT-PCR):** Reverse transcription-PCR (RT-PCR) for rapid influenza antigen test by using reagents provided by Bioperfectus Technologies Co., Ltd. (Jiangsu, China) showed the result as positive influenza A HINI antigen (+) and negative influenza B virus antigen (-).
- **Chest Radiograph:** Showed patchy ground-glass opacity in the lateral basal segment of the lower lobe of the right lung and vascular thickening in the lesions, indicating acute respiratory distress syndrome.

d)Plan-Treatment Regimen:

- **Treatment:**
  - After First Time Hospitalisation: Oral oseltamivir levofloxacin tablets (0.5 g. q.d., 7 days) and oseltamivir capsules (75 mg, bid., 7 days) as a routine treatment for influenza.
  - After Hospitalisation on January 26th, 2020: She was admitted to isolation ward and all her close contacts were quarantined. The patient was treated with antiviral therapy (Abidor 200 mg. tid, Levofloxacin tablet 0.5g, q.d.; Mist- interferon atomization 500 IU, b.i.d.).
- **RT-PCR/Nucleic Acid Test for COVID-19:**
  - Positive (January 28th)
  - Negative for COVID-19 on Feb 5th and Feb 9th.

Result :

Notes on subjective, objective, assessment and plan for COVID-19 (real/ hypothetical) disease conditions was prepared and discussed.