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Diploma in Pharmacy 2nd Year
Pharmacotherapeutics
Experiment

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

Aim:

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

Reference :

‘ Dr. Gupta G.D. , Dr. Sharma Shailesh, Dr. Sharma Rahul Kumar, “Practical Manual of Pharmacotherapeutics” Published by Nirali Prakashan, Page no 28 - 30

Theory :

1.COPD

i) Case I

a. Subjective:

- **Name:** ABC
- **Age:** 60 yrs
- **Sex:** Female
- **Unit:** MED I
- **DOA:** 12/02/2001
- **Reason for Admission:** Complaints of acute onset shortness of breath. She reports difficulty breathing at rest, forgetfulness, mild fatigue, feeling chilled, requiring blankets, increased urinary frequency, incontinence, and swelling in her bilateral lower extremities that are new-onset and worsening.

- **Past Medical History:** Significant for coronary artery disease, myocardial infarction, COPD, hypertension, hyperlipidemia, hypothyroidism, diabetes mellitus, peripheral vascular disease, tobacco usage, and obesity. Past surgical history is significant for an appendectomy, cardiac catheterization with stent placement, hysterectomy, and nephrectomy.
- **Past Medication History:** Fluticasone-vilanterol 100-25 mcg inhaled daily, hydralazine 50 mg by mouth, 3 times per day, hydrochlorothiazide 25 mg by mouth daily, albuterol-ipratropium inhaled every 4 hours PRN, levothyroxine 175 mcg by mouth daily, metformin 500 mg by mouth twice per day. nebivolol 5 mg by mouth daily, aspirin 81 mg by mouth daily, vitamin D3 1000 units by mouth daily, clopidogrel 75 mg by mouth daily, isosorbide mononitrate 60 mg by mouth daily, and rosuvastatin 40 mg by mouth daily.
- **Family History:** Significant heart disease and prostate malignancy in her father
- **Allergies and Social History**: Positive for smoking tobacco use at 30 pack years. She quit smoking 2 years ago due to increasing shortness of breath

b. Objective:

- **Height:** 160 cm
- **Weight:** 100 Kg
- **BP:** 104/54 mmHg
- **PR:** 74 bpm
- **RS:** 24/min
- **Temperature:** 97.3°F
- **Oxygen Saturation:** 90%

c. Assessment:

- **Constitutional:** Extremely obese, acutely ill-appearing female Well-developed and well-nourished with BiPAP in place Lying on a hospital stretcher under 3 blankets.
- **HEENT:**
  - **Head:** Normocephalic and atraumatic
  - **Mouth:** Moist mucous membranes
  - Macroglossia
  - **Eyes:** Conjunctiva and EOM are normal. Pupils are equal, round, and reactive to light. No scleral icterus. Bilateral periorbital edema present.
  - **Neck:** Neck supple. No JVD present. No masses or surgical scarring.
  - **Throat:** Patent and moist
- **Cardiovascular:** Normal rate, regular rhythm, and normal heart sound with no murmur. 2+ pitting edema bilateral lower extremities and strong pulses in all four extremities
- **Pulmonary/Chest:** No respiratory status distress at this time, tachypnea present, (+) wheezing noted, bilateral rhonchi, decreased air movement bilaterally. The patient was barely able to finish a full sentence due to shortness of breath.
- **Abdominal:** Soft. Obese. Bowel sounds are normal. No distension and no tenderness
- **Skin:** Skin is very dry
- **Neurologic:** Alert, awake, able to protect her airway. Moving all extremities. No sensation losses
- **ECG:** Normal sinus rhythm with non-specific ST changes in inferior leads. Decreased voltage in leads I, III, aVR, aVL, aVF.
- **Chest X-ray**

- **Findings:** Bibasilar airspace disease that may represent alveolar edema. Cardiomegaly noted. Prominent interstitial markings were noted. Small bilateral pleural effusions
- **Radiologist Impression: b**

- **CMP**
  - Showed creatinine elevation above baseline from 1.08 base to 1.81, indicating possible acute injury. EGFR at 28 is consistent with chronic renal disease. Calcium was elevated to 10.2. However, when corrected for albumin, this corrected to 9.8 mg/dL..
  - Initial arterial blood gas with pH 7.491, PCO_2 27.6, PO_2 53.6, HCO_3 20.6, and oxygen saturation 90% on room air, indicating respiratory alkalosis with hypoxic respiratory features.
  - Influenza A and B: Negative
- **TSH:** 112.717 (H)
- **Free T_1:** 0.56 (L)
- **TSH and Free T4 b**
- **BNP:** 187
- **CT chest** without contrast was primarily obtained to evaluate the left hemithorax, especially the retrocardiac area.
- **Radiologist Impression:** Tiny bilateral pleural effusions Pericardial effusion. Coronary artery calcification. Some left lung base atelectasis with minimal airspace disease.
-

d. Plan: Management:

- **Endocrine:** A bolus of 5 to 20 micrograms of T3 is administered intravenously, followed by doses of 2.5 to 10

micrograms every eight hours. A daily intravenous dose of 50 to 100 micrograms of T4 is administered after an intravenous loading dose of 300 to 600 micrograms. If coexisting adrenal insufficiency is suspected, hydrocortisone 50 to 100 mg every eight hours should be given until the condition is ruled out by a random serum cortisol measurement. Clinicians in this instance administered 100 mg IV of hydrocortisone every 8 hours. An alternate treatment is dexamethasone 2 to 4 mg every 12 hours.

- **Respiratory:** For vasopressor support, modest doses of norepinephrine were started, while ketamine and low doses of propofol were administered to induce drowsiness. To treat metabolic acidosis, the patient was ventilated using an AC mode with a tidal volume of 6 ml/kg of ideal body weight, a flow of 70, an initial fio2 of 100%, a rate of 26 per minute, and a PEEP of 8.

ii) Case II

a) Subjective:

- **Name:** Mr TLT
- **Age:** 58 yrs
- **Sex:** Male
- **Unit:** MED I
- **DOA:** 2/06/2009
- **Reason for Admission:** Due to newly diagnosed chronic obstructive pulmonary disease.
- **Past Medical History:** He was diagnosed with hypertension last year as an incidental finding during a visit to the kilinik kesihatan for an upper respiratory tract infection.

- **Past Medication History:** (currently taking tablet Amlodipine 5 mg once daily.
- **Family History:** strong family history of hypertension in that his mother as well as two other siblings are also hypertensive
- **Allergies and Social History:** He is a chronic smoker for the past 40 years and smokes about 20 sticks of cigarettes a day and drinks alcohol with his friends on weekends. There is history of reduced effort tolerance.

b) Objective:

- **Height:** 162 cm
- **BP:** 129/73 mmHg
- **Weight:** 81 Kg
- **PR:** 72 bpm
- **RS**: 28/min
- **Temperature:** 38°C
- **Oxygen Saturation:** 95%

c) Assessment: Laboratory findings of blood glucose level

- **Provisional Diagnosis:** Acute exacerbation of newly diagnosed chronic obstructive airway disease due to upper respiratory tract infection.
- **Congestive Cardiac Failure:** Congestive cardiac failure may strike a patient cither directly or as a side effect of a chronic pulmonary condition. Lower effort tolerance has been documented in the past. Congestive heart failure may also be indicated physically by little crepitations at the bases of the lungs on either side. Additionally, there is proof of a marginally elevated JVP and a mild pitting ankle oedema.
- **Bronchiectasis:** Patients with bronchiectasis have a history of persistent coughing and excessive sputum production

Additionally, they may always be out of breath, have a low tolerance for effort, and wheeze.

- Complete Blood Count:
  - **White Cell Count:** 7.91 X 109/L
  - **Red Blood Cell:** 4,48 X 1012/L
  - **Haemoglobin:** 133.00 g/dl
  - **Haematocrit:** 42.00 ratio
  - **Mean Cell Volume:** 93.80 fL
  - **Mean Cell Haemoglobin:** 29.70 pg
  - **Platelets:** 141.00 X 109/L
  - **Mean Cell Haemoglobin Conc.:** 317.00 g/1
  - Differential count
  - **Neutrophils:** 60.10% 4.76 X 109/L
  - **Lymphocytes:** 25.30% 2.00 X 109/L
  - **Monocytes:** 13.80% 1.09 X 109/L
  - **Eosinophils:** 0.50% 0.04 X 109/L
  - **Basophils:** 0.30% 0.02 X 109/L
- **Plain Chest Radiograph:** Hyperinflation of the chest with the 7th anterior rib crossing the diaphragm. No other abnormalities seen.
- **Electrocardiogram:** Normal ECG with low voltage is seen in a hyper inflated chest such as in patients with COPD
- **Blood Urea Serum Electrolytes and Creatinine:**
  - **Urea:** 3.7mmol/L
  - **Sodium:** 135 mmol/L
  - **Potassium:** 3.7 mmol/L
  - **Creatinine:** 65 umol/L

d) Plan:

- Acute Management:
  - Maintain SpO2 above 90% and administer 3L/min of nasal prong oxygen. To guarantee adequate oxygenation without

carbon dioxide retention and acidosis, arterial blood gas should be taken.

- Continuous vital sign and SpO2 monitoring every hour until the patient's dyspnea subsides.
- If a patient's condition worsens, such as with an increase in breathing rate or a dip in oxygen saturation below 92%, nursing staff should be alerted.
- Ipratropium Bromide: Salbutamol: Normal Saline in a ratio of 2:2:1 should be administered by nebulizer every four hours until breathlessness subsides.
- Prednisolone 40 mg orally once daily for 10 days. V. Chest physiotherapy and postural drainage may be used.
- It is possible to administer oral antibiotics such T. cefuroxime. This patient was not provided this, as will be covered in more detail later.

- **Long Term Management:**
  - MDI ipratropium bromide 40 microgrammes tds
  - MDI salbutamol 200 microgrammes PRN
  - Counseling on proper inhaler technique.
  - Counseling on smoking cessation.

Result :

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