

# Assignment

**Course Title: Human Physiology**

**Instructor: Dr Sara Naeem**

**Total Marks: 80**

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## **QUESTION NO 1**

**Explain any respiratory disease of your own choice. You have to write signs and symptoms, chest X-ray and treatment as Well?**

### **RESPIRATORY SYSTEM :-**

Relating to or affecting respiration or the organs of respiration.

### **RESPIRATORY DISEASES:-**

- Asthma

### **ASTHMA :-**

A respiratory condition marked by attacks of spasm in the bronchi of the lungs, causing difficulty in breathing. It is usually connected to allergic reaction or other forms of hypersensitivity.

### **SIGNS AND SYMPTOMS :-**

- Coughing or wheezing attacks that are worsened by a respiratory virus, such as a cold or the flu
- Trouble sleeping caused by shortness of breath, coughing or wheezing.
- Chest tightness or pain.
- Anxiousness or panic
- Fatigue
- Difficulty talking
- Coughing, especially at night, when laughing, or during exercise.

### **CHEST X-RAY :-**

Asthma may cause a small increase in the size of your lungs (called hyperinflation), but a person with asthma will usually have a normal chest X-ray. An X-ray of lungs can help the doctor rule out other health conditions that may be behind your asthma-like symptoms. A chest X-ray typically won't show if a person has asthma, but can tell if something else (such as pneumonia or a foreign body in the airway) could be causing symptoms similar to asthma. Asthma is often diagnosed based on a person's history and physical exam.

### **TREATMENT:-**

In some cases, allergy medications are necessary.

- Quick-relief inhalers (bronchodilators) quickly open swollen airways that are limiting breathing.

- Long-term asthma control medications, generally taken daily, are the cornerstone of asthma treatment.
- Used on a daily basis, these medications can reduce or eliminate asthma flare-ups.
- Anticholinergics help to stop your muscles from tightening around your airways. They're usually taken daily in combination with anti-inflammatories.
- Anti-inflammatory are taken with an inhaler, corticosteroids and other anti-inflammatory medications help reduce swelling and mucus production in your airways, making it easier to breathe.
- Long-acting bronchodilators should only be used in combination with anti-inflammatory asthma medications.

## **QUESTION NO 2**

**Take any disease of blood. Give blood tests and their results. What will be the management of the disease( treatment)?**

### **BLOOD DISEASES :-**

Any disease of the blood, involving the white blood cell(leukocytes), the red blood cells (erythrocytes), platelets(thrombocytes) or the tissues in which these elements are formed, the bone marrow, lymph nodes, and spleen, or of bleeding and blood clotting.

### **NAME OF BLOOD DISEASES :-**

There are so many blood diseases one of them are written below

- **Leukemia (blood cancer)**

### **LEUKEMIA:-**

Leukemia is cancer of the blood and bone marrow. Bone marrow, located in the spongy portions of the body's bones (primarily ribs, vertebrae, sternum, bones of pelvis), makes early blood-forming cells, precursors of red blood cells, platelets, and white blood cells.

### **BLOOD TEST:-**

Blood tests used to diagnose cancer include: Complete blood count (CBC). This common blood test measures the amount of various types of blood cells in a sample of your blood. Blood cancers may be detected using this test if too many or too few of a type of blood cell or abnormal cells are found.

### **LEUKEMIA DETECTED IN BLOOD CELLS :-**

At a sample of blood, doctor can determine if patient have abnormal levels of red or white blood cells or platelets, which may suggest leukemia. Bone marrow test, the doctor may recommend a procedure to remove a sample of bone marrow from patient's hipbone

### **RESULTS OF BLOOD TESTS :-**

This blood test gives details about red blood cells, white blood cells and platelets. If someone have leukemia they will have lower than normal counts of red blood cells and platelets, and higher than normal counts of white blood cells. Some leukemia cells may be found.

## **TREATMENT :-**

Treatment for leukemia depends on many factors. doctor determines leukemia treatment options base include on patients age and overall health, the type of leukemia patient have, and whether it has spread to other parts of the body, including the central nervous system.

Common treatments used to fight leukemia include:

## **BIOLOGICAL THERAPY :-**

Biological therapy works by using treatments that help patient immune system recognize and attack leukemia cells.

## **RADIATION THERAPY :-**

Radiation therapy uses X-rays or other high-energy beams to damage leukemia cells and stop their growth. During radiation therapy, patient lie on a table while a large machine moves around , directing the radiation to precise points on patients body. Patients may receive radiation in one specific area of the body where there is a collection of leukemia cells, or patient may receive radiation over the whole body. Radiation therapy may be used to prepare for a stem cell transplant.

## **CHEMOTHERAPY:-**

Chemotherapy is the major form of treatment for leukemia. This drug treatment uses chemicals to kill leukemia cells. Depending on the type of leukemia patient have, patient may receive a single drug or a combination of drugs. These drugs may come in a pill form, or they may be injected directly into a vein.

## **STEM CELL TRANSPLANT :-**

A stem cell transplant is a procedure to replace patient diseased bone marrow with healthy bone marrow. Before a stem cell transplant, patient receive high doses of chemotherapy or radiation therapy to destroy diseased bone marrow. Then patient receive an infusion of blood-forming stem cells that help to rebuild their bone marrow. they may receive stem cells from a donor, or in some cases patient may be able to use their own stem cells. A stem cell transplant is very similar to a bone marrow transplant.

## **SUPPORTIVE TREATMENTS :-**

Because many of the treatments for leukemia deplete normal blood cells, increasing the risk for bleeding and infection, supportive treatments may be needed to help prevent these complications of treatment. Supportive treatments may also be needed to help minimize and manage unpleasant side effects of medical or radiation therapy.

Types of supportive and preventive treatments that can be used for patients undergoing treatment for leukemia include the following:

- White blood cell growth factors to stimulate white blood cell production (such as granulocyte-colony stimulating factor [G-CSF], made up of filgrastim [Neupogen] and pegfilgrastim [Neulasta] and granulocyte macrophage-colony stimulating growth factor [GM-CSF], made up of sargramostim [Leukine])
- Blood or platelet transfusions
- Antibiotics or antiviral medications to treat or prevent infections

- Red cell growth factors to stimulate red blood cell production (darbepoetin alfa [Aranesp] or epoetin alfa [Procrit])
- Vaccines against the flu or pneumonia
- Intravenous injections of immunoglobulins to help fight infection