PASSAGE 3

A chemical incident is a dangerous emergency that can seriously affect public health and safety. In these situations, healthcare professionals, emergency responders, and hospitals must work together quickly to save lives. Good communication, teamwork, and medical knowledge are very important, especially during exposure to hazardous chemicals. One example of this occurred when an explosion happened at a pesticide warehouse near a residential area . The explosion released toxic chemicals such as ammonia gas and organophosphate pesticides into the air. Many workers and residents nearby experienced breathing difficulties, poisoning symptoms, and other serious health problems. Emergency Medical Services (EMS) immediately transported the victims to Seri Murni Hospital for treatment.

When the hospital received the emergency alert, the Emergency Department (ED) activated "Code Orange," which is used during a mass casualty incident. The medical team prepared the decontamination area and wore Personal Protective Equipment (PPE), including N95 masks, gloves, gowns, and face shields. PPE is important because healthcare workers can also become contaminated if exposed to dangerous chemicals. According to the HazMat officer, the chemical levels in the air exceeded the Permissible Exposure Limit (PEL). This increased the risk of severe respiratory problems such as pulmonary edema and acute respiratory failure. Authorities later confirmed that the chemicals involved included chlorpyrifos, an organophosphate pesticide. Organophosphate poisoning is dangerous because it affects the nervous system by causing excessive acetylcholine in the body. Common symptoms can be remembered using the abbreviation SLUDGE: salivation, lacrimation, urination, defecation, gastrointestinal distress, and emesis.

One of the first patients treated was Mr. Hafiz, a 38-year-old warehouse worker. He suffered from chest tightness, dizziness, blurred vision, and shortness of breath. His oxygen saturation (SpO2) was low, showing serious breathing difficulties. The doctor immediately performed the ABC assessment, which stands for airway, breathing, and circulation. Oxygen therapy and decontamination were started immediately to stabilize his condition. The medical team also performed several tests, including an electrocardiogram (ECG) and arterial blood gas (ABG) analysis. Mr. Hafiz received intravenous (IV) fluids and atropine, an antidote used to treat organophosphate poisoning. Later, pralidoxime was also administered to help restore normal nerve function.

Another patient was Mrs. Lina, a pregnant woman exposed to ammonia gas while evacuating her apartment. She experienced dizziness, wheezing, and reduced fetal movement. Doctors closely monitored both the mother and the baby because toxic inhalation can reduce oxygen supply to the fetus. She received oxygen therapy and bronchodilator treatment to improve her breathing. The most critical patient was Adam, a sixteen-year-old boy who collapsed after severe inhalation exposure. His oxygen level remained dangerously low despite oxygen therapy. Doctors diagnosed possible Acute Respiratory Distress Syndrome (ARDS) and performed Rapid Sequence Intubation (RSI) to secure his airway. He was later placed on mechanical ventilation to support his breathing.

During the incident, decontamination procedures were extremely important. Removing contaminated clothing and washing exposed skin helped prevent further chemical spread. The hospital also used START triage, which stands for Simple Triage and Rapid Treatment, to categorize patients based on the severity of their conditions. Besides medical treatment, healthcare workers also needed to communicate carefully with worried family members. Doctors and nurses had to provide honest updates while remaining calm and compassionate during the emergency. After several hours, the patients gradually stabilized. The incident showed the importance of emergency preparedness, teamwork, and fast medical response during chemical disasters. It also demonstrated how medical abbreviations such as EMS, PPE, ABC, ABG, RSI, and ARDS help healthcare professionals communicate quickly and effectively in emergency situations.

From Passage 3 (Chemical Incident) you are required to answer these questions listed below:

1. List the meaning for each of the following abbreviations:

i. EMS =

ii. PPE =

iii. PEL =

iv. ABC =

v. ARDS =

vi. START =

2. Choose one abbreviation and answer:

i. What does the abbreviation mean?

ii. When is it used?

iii. Why is it important in patient care?

LIVEWORKSHEETS