

# Emergency in Dental Clinic

## Ø Introduction:

### 1. Protocols for managing medical emergencies:

- a) Calm, smoothly functioning staff.
- b) Every one must know & practice his role.
- c) Plans to control measures quickly.
- d) Office manual includes instructions & protocols.
- e) Number of each patient physician must be included in his medical history.

### 2. Documentation of emergency case:

- Exactly what happened.
- Treatment provided.
- Condition of patient when he left.

## Ø Diagnostic vital signs:

### 1. Pulse:

It is the rhythmic expansion of an artery as the heart beats, it is normally in adults 60-100 bpm & in children 70 – 110 bpm.

- a) Pulse in wrist (radial artery): on the inner surface of the wrist.
- b) Pulse in neck ( carotid artery): down the side of the neck.

### 2. Blood pressure:

It refers to the systolic & diastolic values of arterial pressure, normally in adults it is 80-120 mm.Hg. it is measured by the use of a stethoscope & sphygmomanometer.

#### a) Types of blood pressure meters:

- Mercury manometer.
- Battery operated digital manometer.
- Electronic units.

b) Korotkoff sounds: it is a series of sounds as the blood rushes back into the brachial artery.

### 3. Respiration rate:

Normal respiration rate for adults is 10-20 breath per minute, for children is 20-26 bpm.

#### **4. Body temperature:**

Normal oral temperature ranges from 35.8-37.3°C taken by thermometer.

#### **Ø Emergency supplies:**

Ammonia ampoules – sugar packets – nitroglycerin – epinephrine syringe – plastic syringe – ampoules of antihistamines – bronchodilator inhaler – tourniquet – pocket mask – oxygen tank – resuscitation masks.

#### **Ø Cardiopulmonary resuscitation (CPR):**

##### **1. The ABCs of life support are:**

Airway, breathing & circulation.

##### **2. Possible CPR complications:**

Broken ribs – pneumothorax – laceration of liver, spleen, lungs, or heart.

##### **3. CPR for a child:**

Heel of one hand is placed on the sternum, the ratio is 5 compressions to 1 rescue breath.

##### **4. CPR for an adult:**

Do finger sweep to ensure patent airway, then perform two deep rescue breathings, then 15 compressions of the chest.

##### **5. Rescuing patient with blocked airway:**

Abdominal thrusts or Heimlich maneuver.

#### **Ø Life threatening emergencies:**

##### **1. Unconsciousness:**

- a. Syncope: transient loss of consciousness.
- b. Shock: blood flow to peripheral tissues is inadequate to sustain life.

##### **2. Altered consciousness:**

- a. Hypoglycemia: abnormally low blood sugar (insulin shock).
- b. Postural hypotension: reduced circulation (orthostatic hypotension).

### **3. Convulsions:**

Epileptic seizures: generalized tonic-clonic seizures in four phases.

### **4. Respiratory distress:**

Breathing difficulty in conscious patient, as in case of bronchospasm (partial obstruction of the airway).

### **5. Drug related crises:**

- a. Local anesthetic overdose: involves physically small patients.
- b. Allergic reactions: hypersensitivity to specific antigens, it is of two types, skin type & anaphylaxis.

### **6. Chest pain:**

- a. Angina pectoris: narrowing of coronary arteries & decreased blood flow to the heart.
- b. Acute myocardial infarction: one of the coronary arteries that supply the heart muscle becomes blocked (heart attack).
- c. Cardiac arrest: heart stops beating & patient stops breathing.

## **Ø Other medical emergencies:**

### **1. Hemorrhage:**

- a. Mechanical control of hemorrhage.
- b. Hemostatic drugs.
- c. Clotting aids.

### **2. Cerebrovascular accident:**

Sudden interruption of the blood supply to the brain (stroke).

### **3. Diabetes mellitus:**

Hypoglycemia – hyperglycemia – diabetic acidosis.

## **Ø Treatment procedures:**

### **1. Treating patient with syncope:**

Supine position – establish an airway – give oxygen.

### **2. Treating conscious patient with hypoglycemia:**

Place the patient in a comfortable position & give oral sugar.

### **3. Treating an unconscious patient with hypoglycemia:**

Supine position – smear liquid sugar.

### **4. Treating patient with postural hypotension:**

Supine position – oxygen administration.

**5. Treating patient with epilepsy:**

Supine position – intravenous anticonvulsant as diazepam.

**6. Treating patient with bronchospasm:**

Comfortable position – give bronchodilator.

**7. Treating patient with local anesthetic overdose:**

Call EMS – supine position – give oxygen.

**8. Treating patient with anaphylaxis:**

Call EMS - supine position – epinephrine (1:1000) – antihistamines.

**9. Treating patient with angina pectoris:**

100% oxygen – nitroglycerine.

**10. Treating patient with acute myocardial infarction:**

Call EMS – oxygen is given – nitroglycerin.

**11. Treating patient with cardiac arrest:**

Call EMS – begin CPR.