

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 stop 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.