CHAPTER 5

LIFE SAVING TREATMENTS

At any stage of the approach to the incident or during the examination you may detect an injury or serious condition. The conditions you detect will fall into three groups:

1. those which threaten life which you can treat,
2. those which threaten life which you cannot do anything about, and
3. those which will not immediately threaten life

There are five areas of life saving activity,

1. Clearing the airway,
2. Conducting Assisted Ventilation,
3. Conducting Cardio-Pulmonary resuscitation,
4. Controlling Severe Haemorrhage, and
5. Managing the unconscious casualty

CLEARING THE AIRWAY

In dealing with any casualty it is vital that you deal with the airway first. The danger from airway obstruction is very real in all casualties who have a reduced level of consciousness. Most airway blockages are caused by the casualty’s own position, saliva, mucus, tongue, tissues, blood, vomit, teeth, food and foreign bodies.

CHECK AIRWAY

-extend head backward
-open mouth and look in
-smell for vomit or blood
-check dentures are fixed and if so leave in place
-listen for noisy breathing

![Fig. 3-6: Clear airway with fingers](image)

PROCEDURE FOR CLEARING THE AIRWAY

1. Either turn casualty onto side (Stable Side Position) or
   Turn casualty’s head to the side
   carefully use index and big fingers to scoop matter from mouth and
   Drain fluids
CHOKING

Choking is due to the blockage of the casualty’s airway with a foreign object or substance. Choking falls into two categories; partial and complete obstruction.

PROVISIONAL DIAGNOSIS OF PARTIAL OBSTRUCTION

HISTORY
a. Adult casualty has often been talking, eating and drinking alcohol
b. Child casualty has often been seen playing with small objects
c. Elderly and infirm person
d. Story of sudden violent struggling by casualty

SIGNS
a. Poor perfusion and respiratory distress
b. Convulsive and violent efforts to breath
c. Distended neck and facial veins
d. Clutching at throat
e. Noisy breathing

SYMPTOMS
a. Patient is distressed

TREATMENT FOR PARTIAL OBSTRUCTION

1. Approach to the Incident
2. Call ambulance immediately
3. Calm casualty down and get them to rest
4. Get casualty to control breathing
5. Continue to reassure casualty
6. Keep casualty still and do not attempt to clear obstruction

COMPLETE OBSTRUCTION

The History will tell you if a casualty has suffered a complete obstruction of their airway. Very few people, except the very frail or elderly, choke without a struggle. A major indicator of complete obstruction is that the casualty will not make any sound because the airway is completely blocked. Fortunately complete obstruction is rare.

PROVISIONAL DIAGNOSIS OF COMPLETE OBSTRUCTION

HISTORY
a. Adult casualty has often been talking, eating and drinking alcohol
b. Child casualty has often been seen playing with small objects
c. Elderly and infirm person
d. Story of sudden violent struggling by casualty

SIGNS
a. Poor perfusion and respiratory distress
b. Convulsive and violent efforts to breath
c. Distended neck and facial veins
d. Clutching at throat
e. Respiratory arrest

SYMPTOMS
a. None
TREATMENT OF COMPLETE OBSTRUCTION

1. Approach to the Incident
2. Call ambulance immediately
3. Open airway
   - extend head backward
   - open mouth and look in and check for blood, vomit and foreign objects
   - attempt to remove obstruction with fingers without pushing object further down
   - if unsuccessful give four sharp blows to centre of casualty’s back
   - check for respiration,

Fig. 3-7: Slow sharp chest thrusts

4. If Airway still obstructed:
   - place casualty supine
   - place both hands middle of breast bone
   - same position as CPR
   - compress chest sharply four times
   - check for breathing
   - If unsuccessful repeat

5. If obstruction is ejected, check for breathing:
6. If casualty begins breathing place on side and watch for vomiting,
7. Take and record a full set of observations.

Fig. 3-8: Clearing an infant’s airway
ASSISTED VENTILATION IN CPR

Assisted Ventilation is designed to provide a supply of oxygen to the casualty who is unconscious and doesn’t show normal breathing.

<table>
<thead>
<tr>
<th>Performing Assisted Ventilation</th>
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<tbody>
<tr>
<td>1. Approach to the incident</td>
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<tr>
<td>2. Approach to the casualty</td>
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<tr>
<td>3. Obtain assistance</td>
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<tr>
<td>4. Check and clear airway</td>
</tr>
<tr>
<td>5. Check respiration - If no normal breathing</td>
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<tr>
<td>6. Begin assisted ventilations</td>
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<tr>
<td>- Keep casualty’s head extended</td>
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<tr>
<td>- Pinch nose closed using the forefinger and thumb of hand on forehead</td>
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<tr>
<td>- Take a slightly bigger than normal breath</td>
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<td>7. Inflate casualty’s lungs</td>
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<tr>
<td>- Seal casualty’s mouth by completely covering with your own</td>
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<tr>
<td>- Blow air into casualty’s lungs</td>
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<tr>
<td>- Watch and feel for the rising of casualty’s chest</td>
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<tr>
<td>8. Following two (2) quick and effective breaths commence chest compressions</td>
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**Fig. 3-9: Inflate casualty’s lungs**

**Inflate Casualty’s Lungs Using Mouth to Nose Resuscitation** *(Useful Where Casualty is in Water or Has Jaw Injuries)*

- Take a slightly bigger than normal breath
- Cover casualty’s nostrils with your mouth and seal tightly
- Seal casualty’s lips with thumb
- Blow air into casualty’s lungs
- Watch for the rising of chest

**Inflate Casualty’s Lungs Using Mouth to Stoma Resuscitation**

- Take a slightly bigger than normal breath
- Head tilt by using chin lift
- If possible cover stoma with face shield or similar
- Seal casualty’s stoma by completely covering with your own mouth
- Blow air into casualty’s lungs
- Watch for the rising of chest
ASSISTED VENTILATIONS ON BABY

1. For a baby use mouth to mouth and nose
   - use only your cheeks
   - seal casualty’s mouth and nose
   - keep baby’s head in the neutral position
   - puff in air (like blowing out a match) and watch for the rise of the chest

CHEST COMPRESSIONS

Chest compressions are performed following the start of Assisted Ventilations. CPR is the combined use of assisted ventilations and External Cardiac Compression (ECC) to maintain the casualty until the arrival of more advanced medical treatment such as electrical defibrillation or drug therapy. It is very rare for CPR to restart the heart of a casualty.

PERFORMING CARDIO-PULMONARY RESUSCITATION

1. Approach to the Incident
2. Approach to the casualty
3. Call ambulance
4. Check Airway/Breathing
5. Check Skin Colour and Muscle Tone
6. Give 2 quick and effective ventilations
7. Locate Position for Hands for adult
   - locate centre of chest
   - usually between the nipples
   - place the heel of hand in the centre of the chest
   - place the other hand on top and lock
   - extend arms till elbows locked straight
   - position shoulders directly above hands
8. Compress Sternum
   - press sharply but firmly
   - depress sternum 1/3rd the chest depth
   - keep fingers clear of chest wall
9. Rate and Rhythm of CPR by One Rescuer
   - give 30 compressions
   - must produce carotid pulse
10. Rate and Rhythm of CPR by Two Rescuers
   - Give 2 quick and effective ventilations
     - chest must rise
   - give 30 compressions
     - must produce carotid pulse
   - rate of Compression at 100 per minute
   - complete approx. 4 cycles of 2 inflations/30 compressions per minute
   - do not stop
   - only stop if too tired or relieved
CHILDREN AND BABIES

CPR FOR CHILD AGED 1 TO 8 YEARS

- Give 2 quick and effective modified ventilations
  - chest must rise
- locate centre of chest
  - usually between the nipples
- place the heel of hand in the centre of the chest
- place the other hand on top and lock
- extend arms till elbows locked straight
- position shoulders directly above hands

Compress Sternum
- press sharply but firmly
- depress sternum 1/3rd the chest depth
- keep fingers clear of chest wall
- give 30 compressions
  - must produce carotid pulse

Fig.3-14: ECC on child

PERFORM CPR ON BABY UNDER ONE YEAR OLD

- Give 2 quick and effective puffs
  - chest must rise
- locate centre of chest
  - usually between the nipples
- place two fingers of hand at that point
- keep fingers straight vertical
- press sharply but firmly
- depress sternum 1/3rd the chest depth
- give 30 compressions
  - must produce carotid pulse

Fig.3-15: ECC on a baby
CONTROL OF EXTERNAL HAEMORRHAGE

Severe haemorrhage can occur from arteries or from veins and involves large amounts of blood flowing or spurting from the body. Where you come across severe bleeding it is vital that you take immediate action to control it. For example if you observe uncontrolled arterial bleeding you should not check the airway, breathing and signs of life until you have stopped the flow of blood because you would not see arterial bleeding unless the heart was functioning.

Despite the high drama of serious haemorrhage (a little blood goes a long way) it is easy to control using the three simple steps of direct pressure, elevation and rest.

**CONTROLLING A SEVERE HAEMORRHAGE**

1. **Approach to the Incident**
2. **Observe serious bleeding**
3. **Locate site of haemorrhage**
   - cut or remove clothing
4. **Apply immediate direct pressure**
   - immediately grasp wound and apply direct pressure
   - if arterial bleeding place your thumb or finger directly on site of spurt

Fig. 3-16: Direct pressure to bleeding

Fig. 3-17: Elevate bleeding part

5. **Elevate injured part if possible**
6. **Rest and reassure casualty**
   - if possible immediately get casualty to rest or lie down
   - loosen tight clothing, tie, belt etc.
   - reassure casualty
7. **Dress wound**
   - place dressing pad directly on wound
   - cover entire wound
   - pressure on pad
   - small hard object placed directly over site of arterial bleed
   - second pad applied if required
   - firm bandage applied covering entire dressing pad
8. **Check, maintain and immobilise**
   - ensure part is elevated
   - check bandage and dressing for blood seeping through
   - if blood seeping through leave original dressing in place
   - add new dressing on top of original
9. **Recheck dressing for blood seeping through**
   - remove bandage and top dressing
   - apply new dressing
   - place hard object on dressing directly over site of bleeding
   - bandage firmly
10. **Call Ambulance**
11. **Recheck bleeding is controlled**
    - if bleeding is severe and uncontrolled apply constrictive bandage
CONSTRICITVE BANDAGE

As a last resort, in rare circumstances, where direct pressure, elevation and rest does not stop bleeding it may be necessary to use a constrictive bandage. Constrictive bandages are very uncomfortable for the casualty and can cause severe distress.

APPLICATION OF A CONSTRICITVE BANDAGE

1. Cut/remove all clothing from around upper limb
   - ensure that the constrictive bandage can be easily seen
2. Select firm bandage such as a wide bandage
   - ensure material is not too elastic
   - ensure bandage is not too narrow
3. Apply bandage evenly and firmly to limb and tighten until bleeding stops
4. Ensure bleeding is stopped and secure bandage
   - write time of application in pen on casualty’s skin

5. Remove bandage after 30 minutes
   - watch carefully for resumption of bleeding
   - if bleeding is controlled leave bandage off
   - if bleeding recurs proceed with entire procedure again

INTERNAL BLEEDING

Internal bleeding into the chest or abdomen is a common injury which presents a major threat to life. The priority is to get the casualty to a surgical hospital as soon as possible.

PROVISIONAL DIAGNOSIS OF INTERNAL BLEEDING

HISTORY
a. Patient suffering accident
b. History of illness such as cancer or bleeding ulcers

SIGNS
a. Poor perfusion
b. Guarding of abdomen
c. Obvious injury or frank blood excreted from body, coughed, vomited or passed in urine or bowel motion

SYMPTOMS
a. Pain and tenderness
### TREATMENT OF INTERNAL BLEEDING

1. Examine and continuously assess casualty’s perfusion status
2. Immediately call ambulance
3. Elevate casualty’s legs above head
4. Give nothing to eat or drink