UNIT 10  CONTROL OF BLEEDING

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10.0  INTRODUCTION

Bleeding if severe can be life threatening emergency. Bleeding/hemorrhage occurs when blood vessels-arteries, veins or capillaries are injured and blood flows out of the body from the injured part. We have already discussed wounds and bleeding in Unit 1 of Block 3 of Theory Course. You already know that when the large blood vessels are damaged severely, severe bleeding can occur. A large amount of bleeding in short time is called hemorrhage. Bleeding can be external or internal. Uncontrolled bleeding is a life threatening emergency and can result in death. In this unit, you will learn how to recognize and provide first aid care for a bleeding victim.

10.1  OBJECTIVES

After completing this unit, you will be able to:

- identify life threatening external and internal bleeding;
- provide first aid in severe bleeding; and
- demonstrate how to control bleeding in emergencies.

10.2  RECOGNIZING BLEEDING

When bleeding occurs externally, you can see the bleeding from the wound. But if it occurs internally in various organs, the blood may either be seen outside the body or may remain inside the body causing various signs and symptoms. In this section, we will discuss how to recognize various types of bleeding.
Purposes

The purpose of this procedure is to recognize the types of bleeding.

Articles required

You will require various flashcards for recognizing various types of Bleeding. You can also discuss various case scenarios for various types of bleeding.

Procedure

Step 1 To recognize external bleeding, we will see that it occurs from the wound which is external and mostly involves skin and lower layers of skin (Fig. 10.1).

Fig. 10.1: External Bleeding

Step 2 An External Bleeding can be arterial bleeding which is recognized as rapid and severe bleeding which needs more pressure to control. It occurs in deeper cuts and injuries (Fig. 10.2).

Fig. 10.2: External Arterial Bleeding

Step 3 An External Bleeding can be venous Bleeding which is generally easier to control. It occurs when the cuts/wounds/injuries are superficial (Fig. 10.3).

Fig. 10.3: Venous Bleeding

Step 4 An External capillary Bleeding is recognized when the capillary is injured or damaged and the blood flows out slowly. It is often described as “oozing” of blood from the wound (Fig. 10.4).
Step 5 An Internal Bleeding can be recognized by observing the following symptoms:

- Pale, cold, clammy skin, Discoloration of the skin (bruising) in the injured area (Fig. 10.5).
- Rapid weak pulse, rapid breathing.
- Thirst, Nausea, vomiting, coughing blood (Fig. 10.6), Bleeding from body opening (Fig. 10.7).
- Restlessness, confusion, irritability, Collapse, unconsciousness occurs due to internal bleeding in head.
- Pain abdomen, pain in an area of body, tenderness, melena (black tarry stools due to loss of blood from the stomach), person tries to guard and avoid movement in the area affected.

Step 6 In case of Ear bleeding, we see blood coming out from the ear for external bleeding (Fig. 10.8 a). In case of internal bleeding, the ear shows change in colour (Fig. 10.8 b).
Step 7 In case of bleeding from nose, we see bleeding coming out from the nose (Fig. 10.9).

Step 8 In case of eye bleeding, it is recognized as bleeding from eye due to injury to eye, eyelid, or eyeball. It is mostly internal (Fig. 10.10).

Step 9 In case of bleeding from Varicose Veins, the redness on the area or bursting of veins with blood loss is seen (Fig. 10.11).

Step 10 In case of Heavy Vaginal bleeding due to menstruation, the victim will verbalize her condition and will represent signs of fatigue and shock.

Thus, in the above steps we learnt how to recognize different types of bleeding. In the next section, we will discuss about assessment of bleeding and first aid in bleeding. So, let’s continue.
10.3 ASSESSING A VICTIM HAVING BLEEDING

Firstly you have to ensure that the environment is safe for you and the victim. We have discussed this part in detail in Unit 1 (Recognizing emergencies) of Block 2 of Theory course. After this, the most important thing is to assess whether the victim is unconscious or not and what injury he/she has. In this section, you will learn the skills for assessment of the victim having bleeding.

**Purpose**

The main purpose of assessing the victim is to conduct assessment and provide first aid for bleeding.

**Articles required**

For this activity you need to have a volunteer. However, he/she should be explained that they would have to be placed in a specific position by changing the posture.

**Procedure**

**Step 1** Ask the volunteer to act as victim. Ask him/her to lie down on their back.

**Skills:** The volunteer should lie down comfortably on his back with his hand on the side of his/her body and both the feet straight.

**Step 2** Conduct assessment as per the flow-diagram given below
**Skills:** Perform Primary assessment and monitor any bleeding, injury, wound and check for fracture. Check to find out the requirement of the situation.

**Step 3** In case of bleeding, control the bleeding and do dressing and apply bandage as required.

**Skills:** Dressing has been discussed in detail in next Unit of this Block (Unit 11). Control of Bleeding has been discussed in detail in Section 10.4 of this Unit.

**Step 4** Record and Report the findings and Transport the victim.

Therefore, in this section we learnt the steps of assessment of scene and the victim when the emergency has arisen and when the emergency involves bleeding where it is important to apply the procedure for control of bleeding. Now we will learn about this procedure in the next section. So, let’s proceed.

### 10.4 Procedure for Control of External Bleeding

In an episode of bleeding one needs to recognize the type of bleeding immediately. While doing so it is important to understand what your actions are as a first aid provider. In this section, we shall be discussing the procedure for control of bleeding that must be applied when controlling the bleeding. The steps are RED-E as discussed in Theory Block 3, Unit 1.

#### Articles Required

The required articles are:

1. An adult volunteer to act as victim.
2. Case scenario where the use of these articles is required e.g. injury to limbs with heavy bleeding, cuts, open wound.
3. First Aid Box.
4. The standard articles required are dressing, triangular or roller bandages, Adhesive/ Sterilized bandages, dressing, scissors, safety pins, adhesive tape, Antiseptic lotion, cotton, disposable hand gloves, waste bag, tourniquet/binder as required, etc.

Improvised articles can be used as discussed in Unit 6 of this Block on “First Aid with Improvisation”.

#### Steps of Procedure for External Bleeding

**Step 1** Wash the hands.

**Skills:** This is important to prevent cross contamination. After this conduct assessment as given in section 10.3 of this unit.

**Step 2** Make the victim or volunteer to sit or lie down.

**Skills:** The volunteer/victim should be made to lie down to prevent fainting. This is the first step (Rest).
Step 3 Wear Gloves if available.

**Skills:** The procedure for wearing gloves is discussed in Unit 9 of this Block.

Step 4 Remove the clothing around the wound/injured part/bleeding area by cutting the clothing as necessary to expose the wound. (Fig. 10.12). You can tear open the clothes also (Fig. 10.13) to expose the wound. This is the second step (Expose).

![Fig. 10.12: Cut open the cloth](image1)

![Fig. 10.13: Tear open the clothes](image2)

Step 5 Notice the type of wound and the bleeding occurring.

**Skills:** Superficial wounds generally have venous or capillary bleeding and the deeper wounds generally are accompanied by arterial bleeding.

Step 6 Apply direct pressure by pressing hard on the wound with your finger or palms by placing a sterile dressing or any clean cloth such as – towel or handkerchief till bleeding is controlled. Do this for 5-15 minutes (Fig. 10.14). This is the third step (Direct pressure).

![Fig. 10.14 a: Apply Pressure on arm](image3)

![Fig. 10.14 b: Apply Pressure on leg](image4)

In Case nothing is available use the person’s own shirt material available at that time for applying pressure to the wound to stop bleeding.

**Skills:** Pressure placed on a wound restricts the blood flow through the wound and allows normal clotting to occur.

Step 7 Elevate and support the injured area/extremity above the level of victim’s heart, it will slow the flow of blood and encourage clotting (Fig. 10.15). This is the fourth step (Elevate).

**Skills:** This helps to direct the blood supply back to heart for pumping to the vital organs and hence, reduces the loss of blood. You can either hold the extremity high to raise the injured area or place it on chair, pack of books, pillows or anything that can raise the extremity.
Step 8 If the bleeding stops with pressure in 5 to 15 minutes, it is venous bleeding.

*Skills*: The bleeding from veins is usually not severe as veins are superficial and hence, stops with little pressure application continued for 5-15 minutes.

Step 9 If the bleeding does not stop, it is arterial bleeding. If this bleeding is severe and is not stopping even after 15 minutes of application of pressure, raise the injured part as high as possible and apply tourniquet immediately, above the wound. (Fig. 10.16).

*Skills*: Application of tourniquet has been discussed in Unit 3 of this Block. Improvisation for tourniquet is discussed in Unit 6 of this block. Tourniquet is applied when the danger of loss of life exists in severe bleeding episodes.

Step 10 After bleeding is controlled, apply secure dressing with a firm bandage that is tight enough to maintain pressure, but not so tight that it impairs circulation (Fig. 10.17).

*Skills*: If blood soaks through the bandage, add more pads and bandage to help absorb blood. Do not reuse any blood soaked pads because doing so can interfere with blood clotting process.
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Fig. 10.17: Apply dressing and Bandage

**Step 11** Help casualty to lie down covered in a blanket, if available to protect from the cold (Fig. 10.18).

**Step 12** Check for Shock. If you suspect shock is developing, raise and support his/her legs so that they are above the level of heart (Fig. 10.18).

*Skills: Shock has been discussed in Unit 5 of Block 4 of Theory course and Unit 13 of Block 2 of Practical Course.*

Fig. 10.18: Raise legs above heart level and cover the victim with blanket

**Step 13** Conduct Secondary Assessment i.e. monitor and record vital signs – level of response, pulse, breathing, watch for sign of shock, check dressing for seepage, check the circulation beyond the bandage.

**Step 14** Record and Report.

**Step 15** Transport the victim.

**Safety and Precautions**

- Use tourniquet only if the bleeding is severe and cannot be controlled by pressing directly on the wound.
- Apply all the safety precautions for use of tourniquet as discussed in Unit 3 of this Block.
- If bleeding is severe, check for shock and raise the feet and lower the head.
- Avoid putting animal feces or mud on the wound as it may cause dangerous infection.
Thus, in the above steps we learnt the procedure for controlling external bleeding. In the next section, we will discuss about control of internal bleeding. So, let’s continue.

## 10.5 PROCEUDRE FOR CONTROL OF INTERNAL BLEEDING

In this section we will discuss the steps of procedure for control of internal bleeding. We know that internal bleeding occurs in body cavities which can not be seen outwardly with no external sign and symptoms. When you come across the victims with internal bleeding you are expected to make a quick assessment. Observe for shock and the type and pattern of internal bleeding. Also see the various sign and symptoms like signs and symptoms of shock, coughing of blood, presence of Dark, tarry stool - blood in stools and/or blood in urine. Then, provide first aid care as discussed below.

### Articles required

The required articles are:

1. An adult volunteer to act as victim
2. Case scenario where the use of articles is required e.g. fractures, knife /bullet wounds, crush injuries, organ injuries and so on.
3. First Aid Box
4. The standard article required is dressing, triangular or roller bandages, blanket, chair or any material to raise the legs of victim.

### Steps of Procedure for Internal Bleeding

**Step 1** Wash the hands.

*Skills: Important to prevent cross-contamination.*

**Step 2** Make the victim or volunteer to lie down on flat surface.

*Skills: The volunteer/victim should be made to lie down to prevent fainting. After they conduct assessment as given in section 10.3.*

**Step 3** Raise the victim’s legs if no other external injuries are there which make can it difficult to do so.

*Skills: Helps to direct the blood towards heart.*

**Step 4** Maintain body temperature by covering with blankets.

*Skills: Blankets help to provide warmth in case of shock.*

**Step 5** Place a cold or ice pack covered in towel or ice on the area of suspected injury.

*Skills: Ice or cold pack helps to decrease the swelling and blood collection at that area by helping to constrict blood vessels and reducing the supply of blood in that area.*

**Step 6** Conduct Secondary assessment i.e. monitor and record vital sign – level of response, pulse, breathing, watch for sign of shock, check dressing for seepage, check the circulation beyond (below) the bandage.

**Step 7** Record and Report.
Step 8 Transport the victim.

Safety and Precautions

- If serious injury is suspected call for help immediately. Transport the victim rapidly to the hospital as he/she may require immediate surgery.
- Decrease the victim’s fear and anxiety by giving psychological support and reassurance.
- Keep the victim from getting chilled or overheated.
- Do not give victim anything to eat or drink.

Thus, in the above steps we learnt the procedure for controlling internal bleeding. In the next section, we will discuss about control of bleeding in various situations. So, let’s continue.

10.6 PROCEDURE FOR CONTROL OF BLEEDING IN VARIOUS CONDITIONS

In this section we will discuss the steps of procedure to control bleeding in various situations like ear, nose, eye and bleeding from varicose veins. The initial steps in all these cases is to conduct assessment as discussed in Section 10.3 of this Unit and then proceed further.

Articles required

The required articles are:

1. An adult volunteer to act as victim.
2. Case scenario where the use of articles is required e.g. eye bleeding, nose bleeding, ear bleeding, heavy bleeding in menstruation and bleeding from varicose veins.
3. First Aid Box
4. The standard articles required are dressing, triangular or roller bandages, Adhesive/ Sterilized bandages, dressing, scissors, safety pins, adhesive tape, Antiseptic lotion, cotton, disposable hand gloves, waste bag, blanket, chair or any material to raise the legs of victim.

Steps of Procedure for control of Nose Bleeding

Step 1 Wash the hands and put on gloves if required.

Skills: Important to prevent cross-contamination.

Step 2 Make the victim/volunteer to sit with head down.

Step 3 Ask to spit the blood out through mouth.

Step 4 Loosen any tight clothing around the neck and chest like tight shirt or tie or chunni.

Step 5 Ask the casualty to breathe through mouth and pinch soft part of the nose firmly for 10 minutes or until the bleeding stops (Fig. 10.19).
Skills: Check the bleeding. Tell the victim not to breathe in from nose but from the mouth at this moment.

Step 6 Tell to Release the nose after 10 minutes.

Skills: Teach the victim not to blow or finger the nose for several hours after the bleeding has stopped.

Step 7 If bleeding still continues, repeat these steps again.

Step 8 Clean the blood around nose and mouth.

Step 9 Record and Report.

Step 10 Transport the victim to nearest health facility.

Steps of Procedure for control of Eye Bleeding

Step 1 Wash the hands and put on gloves if required.

Step 2 Make the victim/volunteer to sit.

Step 3 Tell casualty not to move his/her head or blink the injured eye. Tell him not to rub his/her eyes.

Skills: This helps to avoid further injury to eye.

Step 4 Cover the eye with eye pad or dressing. Do eye bandaging (Fig. 10.20).

Skills: Dressing has been discussed in the next Unit of this Block. Bandaging of eye has been discussed in Unit 1 of the next Block.

Fig. 10.20: Use of Eye Pad and dressing

Step 5 Record and Report

Step 6 Transport the victim.
Steps of Procedure for control of Ear Bleeding

Step 1  Wash the hands and put on gloves if required.

Skills: Important to prevent cross-contamination.

Step 2  Make the victim or volunteer to lie in half sitting position (Fig. 10.21).

Fig. 10.21: Half sitting position

Step 3  Stand by the side of the victim so that the injured ear is towards you.

Step 4  Apply direct pressure over the area of bleeding in case of external cuts. Wrap the injured part with dressing. Cover or secure with tape. You can also tie an ear bandage.

Skills: The similar skills as required for control of External Bleeding are applied here as also discussed in Section 10.4 of this Unit. Dressing has been discussed in the next Unit of this Block. Bandaging of ear has been discussed in Unit 1 of the next Block (Fig. 10.22).

Fig. 10.22: Ear Bandaging with dressing

Step 5  In case of internal bleeding, check for sign and symptoms. Apply cold pack wrapped in towel to the affected ear.

Step 6  Record and Report. Transport the victim.

Steps of Procedure for control of Bleeding from Varicose Veins

Step 1  Wash the hands and put on gloves if required.

Step 2  Make the victim/volunteer to lie on his/her back.

Skills: Raising helps to direct the blood supply back to heart so that blood is used for maintaining vital organs and helps to reduce blood loss.
Step 3: Raise the affected area as high as possible to reduce bleeding.

Step 4: Remove clothing such as stockings which may restrict blood to flow back to the heart and cause bleeding to continue.

Skills: Remove all constrictive clothing such as tight salwar, jeans, pant, jeggings, leggings which may decrease the free flow of blood back to heart.

Step 5: Wrap the affected area with bandage. If bandage is not available exert pressure (Fig. 10.23).

Skills: Use a crepe or compression bandage for this purpose.

Step 6: If the bleeding continues, put another bandage on the existing one.


Step 8: Record and Report.

Step 9: Transport the victim.

Steps of Procedure for Heavy Vaginal Bleeding due to menstruation

Step 1: Wash the hands and put on gloves if required.

Step 2: Make the victim/volunteer to sit with knee bent and support by rolled up clothing or blanket (Fig. 10.24).

Skills: Move the victim to a comfortable place, where you may ensure privacy.

Fig. 10.24: Sitting with knees bent
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Step 3 Give the victim sanitary pad or clean cloth to place over the vagina.

Step 4 Ask her to take Paracetamol tablets to decrease/relieve pain.

Step 5 Conduct Secondary assessment. Check for Shock and manage shock.

Step 6 Record and Report.

Step 7 Transport the victim to medical facility.

Hence, in this section we learnt about control of bleeding in various situations. With this we come to the end of this important unit on Control of Bleeding.

Check You Progress 1

1. True or False:
   a. Severe External Bleeding occurs due to venous bleeding. True/False ..............
   b. Shock is the common condition accompanied with internal or severe bleeding. True/False ..............
   c. Tourniquet can be used wherever needed. True/False ..............
   d. Victim of internal bleeding should be saved from getting chilled or overheated as it effects the life of the victim. True/False ..............
   e. Crepe Bandage should be applied for bandaging the bleeding varicose veins. True/False ..............

10.7 LET US SUM UP

In this unit, we learnt how to recognize and provide prompt care for both internal and external bleeding so that we can control life threatening bleeding emergencies. In the next unit, we will discuss about wound care and dressing.

10.8 KEY WORDS

Life threatening: Fatal, Deadly, affecting life
Damage: Break, Spoil
 Severely: Serious, Critical to a large extent
Signs: Symbol, Indication
Symptoms: Features of a disease
Rapid: Fastly, swiftly
Pressure: Continuous exerting of force
Superficial: On the surface, not deep
Oozing : Flow out
Pale : Light in colour
Clammy : Moist, sweaty
Discoloration : Change of color
Bruising : Having injury
Restlessness : Inability to rest or relax
Confusion : Uncertainty about what is happening, puzzled
Irritability : Being in a bad mood or bad nature
Collapse : Suddenly fall down or lose consciousness
Loss : Having less of something or destruction of some asset
Tenderness : Sensitivity to pain
Redness : State of being red
Bursting : Break open or apart suddenly and violently
Accompanied : Go somewhere with, assist someone
Restricts : Put a limit on, keep under control
Elevate : Lift to a higher position
Direct : Move from one place to another
Usually : Happening under normal conditions or generally
Application : Use
Secure : Fixed so as not to become loose, or be lost.
Interfere : Obstruct or restrain or prevent from doing something
Clotting : Form or cause to form clots
Dangerous : Able or likely to cause harm or injury
Swelling : An abnormal enlargement of a part of the body
Constrict : Make narrow
Psychological : Emotional, intellectual
Support : Give assistance
Reassurance : The action of removing someone’s doubts or fears
Chilled : Cold
Overheated : Having temperature higher than the human body
Constrictive : Which constricts or becomes smaller or narrower
Exert : Apply pressure

10.9 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

a. False b. True c. False d. True e. True
10.10 ACTIVITIES

Activity 1

Enact a case scenario in which one of your friend has injured his hand with bleeding. Practice the procedure for Control of Bleeding in this situation. Record it in your Log-Book.

(Supervised Activity)

Activity 2

Practice control of Bleeding for your friend who has nose bleeding. Enact the scenario and record in your Log-Book.

(Self Activity)

10.11 REFERENCES