

## **Algorithms for students**

### **1. Stop arterial bleeding with Esmarch's harness**

1. Put on rubber gloves, treat with an antiseptic.
2. Put the patient on the couch .
3. Prepare area limb for applying harness - protect a skin soft lining of the bandage (available directly on the pre-straightened her clothes wrinkles).
4. Betray your limbs in an elevated position.
5. Set the harness of its proximal wound to 5 - 8 cm .
6. Apply a harness in circular rounds, without crossing .
7. Perform an assessment of stopping bleeding, the absence of a pulse on the peripheral artery of the affected limb.
8. Lock the harness .
9. Record the application time of harness (hours, minutes) on the paper, and lock it in a plait round.
10. Ensure that the harness is not superimposed on the joint, the site of the bone fracture.
11. Please note that the harness does not overlap the forearm and lower leg. Also, if possible, the harness is not superimposed in the middle third of the shoulder - the danger of injury to the radial nerve.

### **2 . Arterial bleeding stop by finger pressing of an artery**

1. Put on rubber gloves, treat with an antiseptic.
2. Put the patient on the couch.
3. Determine the type of bleeding and the affected vessel.
4. Carry out a temporary stop of arterial bleeding
  - 4.1 With bleeding from the common carotid artery
    - the position is, the victim on his back, without a pillow
    - turn the victim's head in the opposite direction
    - put the first finger on the middle of the inner edge of the sternocleidomastoid muscle (projection of the upper edge of the thyroid cartilage)
    - second - fifth fingers of the same brush position on the back of the neck
    - press with the first finger towards the spine, pressing the carotid artery to the carotid tubercle at the transverse process of the sixth cervical vertebra
    - rate the effectiveness stop bleeding - bleeding stopped on the camping.
  - 4.2 For bleeding from the brachial artery
    - position of the patient on the back
    - the right of the first hand grab the forearm and raised lift it up, bending the arm at the elbow at an angle of 80 degrees
    - with your left hand grabs the victim 's shoulder so that the first or fourth fingers are on the inner furrow of the biceps of the shoulder, and the thumb is on the opposite side of the shoulder
    - with the four fingers of the left hand, press the brachial artery to the humerus
  - 4.3 For bleeding from the femoral artery
    - The position is, the victim on his back
    - fingers determine the pulsation of the femoral artery, at a point corresponding to the border of the middle and inner third of the inguinal ligament
    - press the artery with his fist or finger to the horizontal second branch of the pubic bone
  - 4.4 For bleeding from the popliteal artery
    - the patient 's position on the back

- position , both hands on the knee so that the thumbs are on the front surface, and the second to fifth on the back surface
- bend the limb in the knee joint at an angle of 120 degrees
- press the popliteal artery to the head of the tibia

### **3. Stop external venous bleeding by applying a pressure bandage**

1. Wear rubber gloves, treat with an antiseptic
2. The position of the victim - on his back or sitting in a comfortable position for him
3. The provisions of lifeguard rescued nearby - so you can see the patient's face (watch - it will not cause pain) and the entire surface of the dressing
4. Under limbs elevated position with a roller-cushion.
5. Cover the wound with a sterile cloth on top of which is located pressuring s element (undeployed first bandage)
6. Apply a circular dressing to maximize pressure on the wound.
  - Free first end of the wrap , take the left hand, and download it to the right part
  - apply the dressing by securing the pressure member
  - roll the bandage around the limb from left to right (clockwise), grabbing the end of the bandage with the first two turns (rounds) and holding each round with your free left hand
  - First two rounds bandage should completely cover one another to consolidate the well s the end of the bandage, and each successive revolution partially has overlap previous, securing it
  - the last 2 rounds of the bandage, like the first two, are superimposed on each other, then the bandage is cut along, knotted both ends (do not tear the bandage, since one of the ends may break off)
  - rate efficiency of stopping bleeding- no bleeding

### **4. Upper limb immobilization with a pneumatic tire**

1. Put on rubber gloves, treat with an antiseptic.
2. Pneumatic tire is removed from the package. Unfasten the clasp and bring under the injured upper limb (place of fixation) .
3. The upper limb is betrayed by a convenient physiological position - the shoulder is taken away to 50 degrees and forward to 30 degrees, bent at the elbow joint by 90 degrees, fingers are bent by 60 degrees
4. The tire is driven in accordance with the position and contour of a fixed location. If necessary, the arm fixed with a bandage across his forearm for a healthy , so as not developed a traumatic shock
5. Make the lining of bandage, cotton wool
- 6 . The tire is fastened. It should be noted , applying e lock does not provide for removal of shoes.
7. Open the valve by turning the air duct tube counterclockwise .
8. Using the pump, inflate the tire and close the valve by turning the tube back .
9. It is necessary to monitor the state of the limb.
10. Check the warm whether, fingers and evaluate the color of the skin on in a in-the presence of cyanosis as well . This is necessary for the prevention of circulatory disorders in the extremities.
11. With bone fractures forearm to be fixed with 2 joints and - elbow and wrist to shoulder - three joints: shoulder, elbow and wrist
12. The patient is transported in a lying or sitting position, depending on the severity of the condition and damage to the victim.

13 When removing, open the valve and then, by unzipping the zipper, the retainer is removed from the upper limb.

## **5. Lower limb mobilization with pneumatic tire**

1. Put on rubber gloves, treat with an antiseptic.
2. Pneumatic tire is removed from the package. Unfasten the clasp and bring under the injured lower limb (place of fixation)
3. The tire is driven in accordance with the position and contour of a fixed location. Be sure to bottom.
4. Make a lining of bandage, cotton wool
5. The lower extremity betray exact physiological put s - femur is removed by 10 degrees, the leg with the bending of the knee at 10-15 degrees, the foot 90 degrees
6. Tire button. It should be noted , the imposition of a retainer does not provide for the removal of clothing, shoes.
7. Close the fastener .
8. Open the valve by turning the air duct tube in a counterclockwise direction.
9. Using the pump, inflate the tire and close the valve by turning the tube back .
10. It is necessary to monitor the state of the limb.
11. Check the warm whether, fingers and evaluate the color of the skin on in a in-the presence of cyanosis as well . This is necessary for the prevention of circulatory disorders in the extremities.
12. The splint must necessarily grab two joints for fractures of the lower leg (knee and ankle) or three joints for fractures of the femur (hip, knee, ankle)
13. When removing, open the valve and then by unzipping the zipper, the retainer is removed from the upper limb.

## **6. The application of an occlusive dressing with open pneumothorax**

1. Put on rubber gloves, treat with an antiseptic.
2. Inter patient a comfortable position: sit down the patient with chest trauma so as to be face-to-patient (maintenance of the patient's condition monitoring capabilities)
3. The skin around the wound is treated with an antiseptic, a wound toilet is performed .
4. Open the IDP.
5. Package taken in the left hand so that the gluing of the free edge is on top, right hand grip notching the second bonding edge and open it, extract the contents of the paper.
6. Get out of folds paper bag stud paper wrap deploying obtained furniture.
7. In the left hand, take the end of the bandage, in the right-hand head of the bandage, spread your arms to the sides (on the segment of the bandage there are two pillows folded in half and have one side, with colored thread: the first pillow is stationary, the second moves along the bandage y ).
8. The sterile side of the rubberized membrane of the IDP tightly closes the wound of the chest wall with a protrusion beyond the edge by 4-5 cm . The edges of the shell should be hermetically taken to the skin.
9. Then impose on e pads of the package, do not ask for the second colored thread on a rubberized shell.
10. Cover the wound with a second side of the pad, do not ask for the second colored thread.
11. Gauze pads strengthen the IDP bandage
12. After the end of the bandage is fixed with a pin or by tying the ribbons.
13. Check the effectiveness of dressing - the absence of symptoms of pneumothorax buildup and the absence of an increase in the area of subcutaneous emphysema.

## **7. Hand treatment of the surgeon**

1. Open the water tap.
2. Wet your hands and forearms
3. Elbow press dispenser with liquid soap
4. First lather the hands and forearms to the middle third.
5. Hands are washed in stages:
  - palmar surfaces first
  - back surfacethe interdigital intervals "palm to palm"  
the interdigital intervals "a hand to the back surface"
  - element "lock", hands closed together, thorough washing of nail and middle phalanges
  - about separately the first finger of each brush
  - the washing up subungual: all the fingers will close in "a handful" and lather on the palmar surface of the hand other
6. Wash off the soap from the hands and arms :
  - first with the hands, so that soapy water flows from the fingers to the forearms
  - then the forearm, so that soapy water drains from the elbows
7. Repeat the steps of soaping the hands and removing soap from the hands and forearms.
8. Do not turn off the water tap
9. On the hand are using a sterile towel, hand and forearm :
  - at first brush hands and then forearm, using one side of the serviette
  - for the second hand use the other side of the serviette
10. Treat the hand and the lower third of the forearm of each hand antiseptic, rubbing it into the skin .
11. Repeat antiseptic treatment of only the hands of each hand.  
Be careful not to touch non-sterile surfaces.

## **8. Putting on a sterile surgical whiteness yourself**

1. P Check the sterility of the contents Shimelbusha's box :
  - e- ticket with date of sterilization
  - the box have a bottle of hot melt agent, the latter is melted
2. Expand sterility in the sheet.
3. Use your hands to remove the robe.
4. Straighten your hands with a dressing gown at chest level.
5. Unfold the robe in front of you.
6. Take it from the inside.
7. And to carefully put your hands in the sleeves.  
Be careful to keep your hands in front of you, do not touch non-sterile surfaces.