MINISTRY OF HEATH OF UKRAINE
POLTAVA STATE MEDICAL UNIVERSITY

Department of general surgery

METHODICAL INSTRUCTIONS
FOR STUDENT SELF-DIRECTED WORK WHEN PREPARING FOR AND DURING PRACTICAL CLASS

Study discipline	**General surgery**
Module №1	**INTRODUCTION TO SURGERY. SURGICAL EMERGENCY CONDITIONS. FUNDAMENTALS OF ANESTHESIOLOGY AND INTENSIVE CARE**
Content module 1.	Introductions in surgery. Bandages. Asepsis and antisepsis. Peculiarities of care of surgical patients
Lesson theme №2	Desmurgy. Bandages on the abdomen, perineum, lower limb. Gypsum technic.
Years of study	***III***
Faculty	**International**

Poltava

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1. Relevance of the topic:

Desmurgy, as a section of general surgery, studies dressings designed for different purposes, mainly where the dressing is fixed or kept for the required period on a wound or area of damage. A doctor of any profession needs the knowledge of desmurgy to provide first aid to victims.

Definitions, rules for applying bandage dressings. Know the types of bandage dressings. Typical dressings on the upper limb, chairman, neck, chest.

2. Learning objectives:

Know:

- types of dressing depending on the purpose;
- functional position of the limb;
- classification of dressings.

Be able to:

- apply different soft dressings;
- apply tires and plaster casts

3. Basic knowledge, skills needed to study the topic (interdisciplinary integration).

Disciplines	Know	Know
Previous		
Anatomy	Anatomical structure of the skeleton, muscle tissue, chest organs, stomach.	Determine the anatomical placement of bones and joints.
Pharmacology	Anesthetics, antishock agents.	The use of a variety of medical anti-shock therapy agents.
Future		
Traumatology and orthopedics	Klasification, pathogenesis and clinical signs of fractures and dislocanion.	Diagnose fractures and dislocations, provide first aid, determine a treatment plan.
Faculty Hospital Surgery	Clinical signs of various injuries of soft tissues, chest and abdominal cavity.	Diagnose and provide first aid to injured victims**.**
Intrasubject		
Aseptics and antiseptics	Rules of asepsis and antiseptics.	Apply an aseptic dressing.

Bleeding	Principles of stopping bleeding.	Stop the bleeding.
Wounds	The clinical picture and first aid for wounds**.**	Revision early, provide first aid.
Traumatology and orthopedics	Classification, pathogenesis and clinical signs of fractures and dislocation	Diagnose fractures and dislocations, provide first aid, determine a treatment plan.
Faculty and hospital surgery	Clinical signs of various injuries of soft tissues, chest and abdominal cavity.	Diagnose and provide first aid to injured people.

4. The content of the topic of the lesson.

Inguinal bandages

Can be used to cover both the inguinal areas and the perineum. Bandage always starts with circular turns around the abdomen at the waist level. Then the bandage is conducted along the front surface of the abdomen obliquely down to the inguinal area, enveloping the thigh of the other leg behind, and along the front surface of the abdomen returns to the starting point. Next, the bandage is circled around the trunk at the back, and along the front surface of the pelvis, obliquely descending into the inguinal area, symmetrically repeating the previous round. The bandage ends with a circular loop at the waist (Fig. 1).

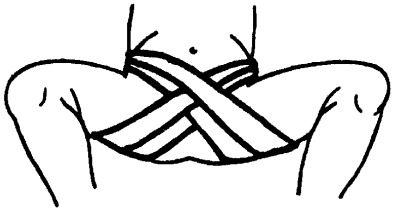
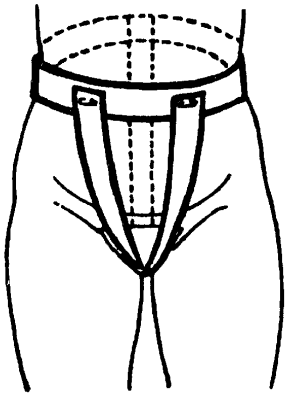
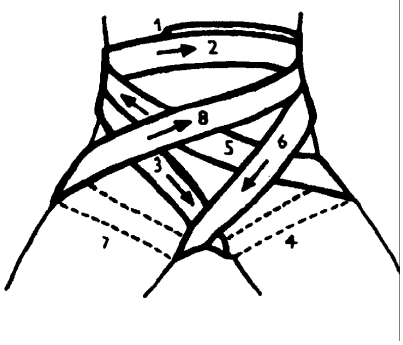


Fig. 1. Spike bandage on the perineum.

Fig. 2. U-shaped bandage on the crotch and bandage on the inguinal region.





Eight bandage on the ankle joint (Fig. 3)

The bandage begins with the first locking loop over the ankles. The following turns is the classic "eight." Toes and heel remain free.

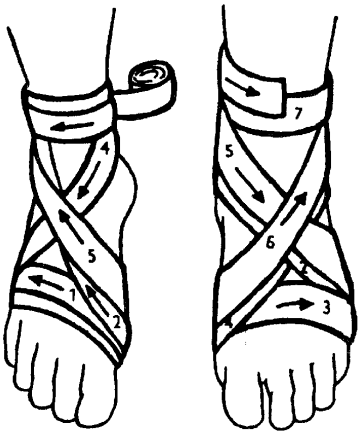


Fig. 3. 8-shaped bandage on the ankle joint.

Swivel (reverse) dressing on the foot

Back dressing for the entire foot (Fig. 4 a). The bandage in circular rounds is fixed on the lower leg, after which the lateral surfaces of the foot are covered with circular rounds (without tension) through the heel and fingers. These tours are fixed with an ascending spiral bandage from the fingers to the lower leg.

The back dressing on the distal parts of the foot (Fig. 4 b). The bandage is fixed in circular rounds on the lower leg and brought to the back surface of the foot, thrown through the fingers and closed the plantar surface of the foot, where the bandage is bent and returned to the back surface. A few reverse rounds cover the entire distal part of the foot, and then fix these rounds with an ascending spiral bandage. The bandage is fixed in a circular round on the lower legs.

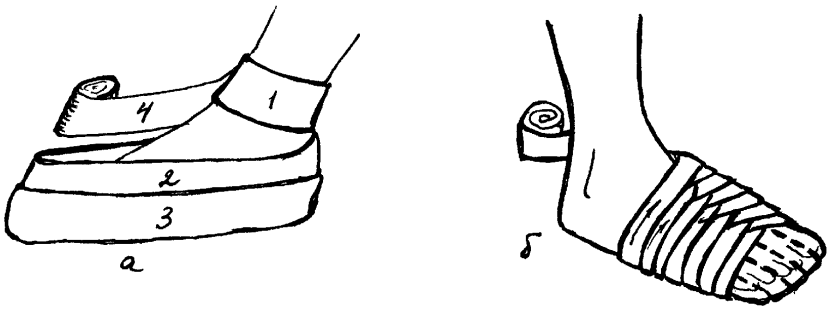


Fig. 4.
a) Rotary (reverse) dressing for the whole foot;
b) Swivel dressing on the distal part of the foot.

Applying elastic bandages to the limbs

To hold sterile material on the wound, tubular knit bandages and elastic mesh-tubular bandages are used, which are very stretched, fit snugly to any part of the body, do not dissolve during incision, and at the same time do not restrict movement in the joints.

Having a mesh structure, elastic mesh-tubular bandages provide the ability to aerate and monitor the condition of the damage site. They can be used to apply not only fixation, but also a pressure dressing, for example, after removal of gypsum, when healing burns, to prevent swelling of the extremities, hematomas after surgery and the maintenance of grafts after skin grafting. Elastic mesh-tubular bandages in accordance with the dimensions are used to fix the dressing on various parts of the body. If the bandage does not match the size of the bandage, parts of the body use a different, more convenient size bandage. Elastic mesh-tubular bandages are produced in rolls of 5-20 m, which are packed in plastic bags.

Sterilization of elastic bandages (if necessary) is performed in an autoclave for 30 minutes under a pressure of 120 kPa (1.2 atm.).

Tight bandage

Tight or crushing or hemostatic dressing. Used to temporarily stop bleeding from superficial veins and small arteries. A dry, if possible sterile napkin is placed on the wound, on top of it is a dense layer of gauze or bandage, which is tightly bandaged. At the same time, the surrounding tissues and blood vessels are mechanically squeezed, contributing to the formation of a blood clot.

Hard dressing:

Cramer Tire Overlay:

In clinical practice, standard universal metal tires are used, which are made of iron, steel or aluminum in the form of lattice structures and are called the Cramer splint. They are lightweight, have great strength and flexibility, allow you to give them any shape (Fig. 5).

Cramer splint come in two sizes (110x10 cm and 60x10 cm). Due to the simplicity and ease of application, they are indispensable for temporary immobilization in fractures, and sometimes for therapeutic immobilization.

For transport immobilization in case of shoulder injuries, it is advisable to use a Cramer splint with a size of 60x10 cm. Sometimes it is necessary to use 2 or more instead of one tire, growing them in accordance with the damaged limb.

When providing first aid to victims with a fracture of the humerus, it is necessary to take into account that the correct position of the fragments will be achieved when the shoulder is removed from the body with its removal along the axis of the central fragment. This must be taken into account when investing a limb on a stair rail, which is previously modeled on itself or on a healthy limb of the victim, if his condition allows.

The tire is covered with cotton wool, which is fixed with a bandage. 75 cm long gauze tapes are tied to the upper end of the tire. Both the shoulder and elbow joints must be strengthened with the splint. The tire model in the following way: at a distance equal to the length of the forearm of the affected it bent at a right angle, then with the other hand take a second end of the splint, bends her back and, leaning on the table, give the tire the desired shape. After that, the splint leans to the limb so that the arm was bent at the elbow at a right angle, the shoulder joint forward about 30 degrees from the frontal plane, the hand was in a state of dorsiflexion in the wrist joint. In the inguinal cavity, it is

recommended to put cotton-gauze roller, which should be strengthened with a bandage through a healthy shoulder girdle. In the palm of the injured hand you need to invest a cotton ball to put the fingers half-bent position. The ends of the gauze strips attached to the upper end of the splint, tied to the opposite end of the splint on the forearm. Finished splinting the additional moves of the bandage around the torso and limbs or placing the hands on the scarf. In open fractures of limbs with injury of the soft tissues must first impose on the wound aseptic bandage, then splint. In fractures of the lower third of the shoulder or of the bones forming the elbow joint, the splint must seize the shoulder, forearm and wrist to the metacarpophalangeal joints. The hand hung in the scarf. The localization of damage in the upper or middle third of the forearm splint Kramer is applied on the outer (extensor) surface of the middle of the shoulder to the metacarpophalangeal joints. The inner surface of the splint is pre-lined with wool. The upper limb should be flexed at the elbow joint under a right angle, and forearm to be in a state, average between pronations and supination; the hand must be rotated by hand to the abdomen in the position of a light extension. fastening splint to limb with bandages and an arm hang on a kerchief.

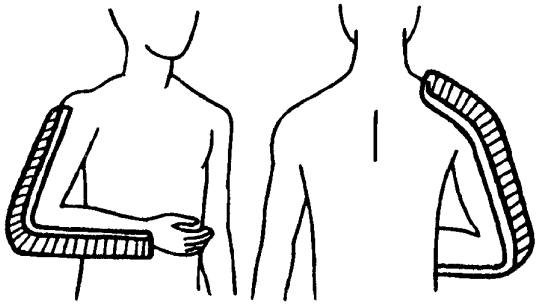


Fig.5. Splint Kramer for transport immobilization of the upper limb.

If the damage to the skull and cervical spine the head and neck can be fixed also by using the splint Kramer. The necessary immobilization of reach with two Kramer splintes. One bus covers both shoulders, ears and crown. The other type is on the back between the shoulder blades at the back of the head intersects with the first at the top of the head and ends at his forehead. The two splintes are bound together everyday armbands. For transport immobilization at the damage of the lower extremities in the absence of splint Diterihs can be used well autodelivery splint Kramer.

When hip fractures take 3 flights of a splint, the size 110x10 cm, 2 of which connect to form one splint, equal in length to the distance from the armpit to the inner edge of the foot of the injured extremity (long splint). This splint Flex from the outer edge of the foot through the sole. The second splint (short) is applied from the gluteal folds to the fingertips on the back surface of the limb to the heel, where bent under the sole of the right angle bend and taken by bending of long splint as the bracket. For greater strength it is possible to impose a third splint Kramer on the inner surface of the legs from the crotch to the inner edge of the foot. Before splinting the joints and bony prominences should be covered with a thick layer of cotton wool, which is fixed with a bandage. In this condition the splint is fixed with bandages or kerchiefs to the torso and thigh and foot fasten at right angles to the axis of the leg 8 and circular moves bandage. Fractures Shin splint Kramer with soft cotton padding, are well simulated by the bending of the limb, is applied to the

back of the thigh and lower leg from the gluteal fold to the heel; then bend at a right angle to the sole (it reaches to the fingertips). On the sides you can add two tires plywood, and the entire device then to fix a spiral gauze bandage. Net bus it is better to apply for external and internal surfaces of the limbs in the form of stirrups, and that the stop was NOT sagging down to make the sole plate, which the tire covers in the form of staples. If you fracture one of the bones of the lower leg immobilization is also necessary to reduce the pain, but you can do one stair splint, which is superimposed on the rear surface of the limb. Fractures of the foot splint of Cramer is superimposed on the lower leg and the foot.

Diterichs tire overlay (Fig. 6)

The standard Diterichs splint consists of two wooden rails that contain stops, two extensions to them, which are combined by the end plate, the supports with a wire clip and twist sticks. At the rounded ends of the plates, wooden pins are mounted for connecting and securing the plates with extensions at the back level, depending on the growth of the patient. The extensions are at the upper ends of the metal staples with which they are connected to the plates. Both extensions have holes for the rails pins. The extensions at the lower end are interconnected by a transverse bar which is hinged to the internal extension. In the center of the cross bar there is a hole with a diameter of 2.5 cm, and a cutout on the side. The footsteps, to which the victim's foot is bandaged, has a wire frame-bracket on the back surface closer to the heel, which protrudes on both sides in the form of "ears" in which the extensions are worn on both sides. A double cord is drawn from the footrest, which is bandaged to the sole, into the hole of the cross bar, which is twisted with a twist wand to create the necessary limb extraction. In the outer rail there are 2 pairs of openings, one at the upper end under focus, the other a little lower. In the inner plate is made one pair of openings under focus.

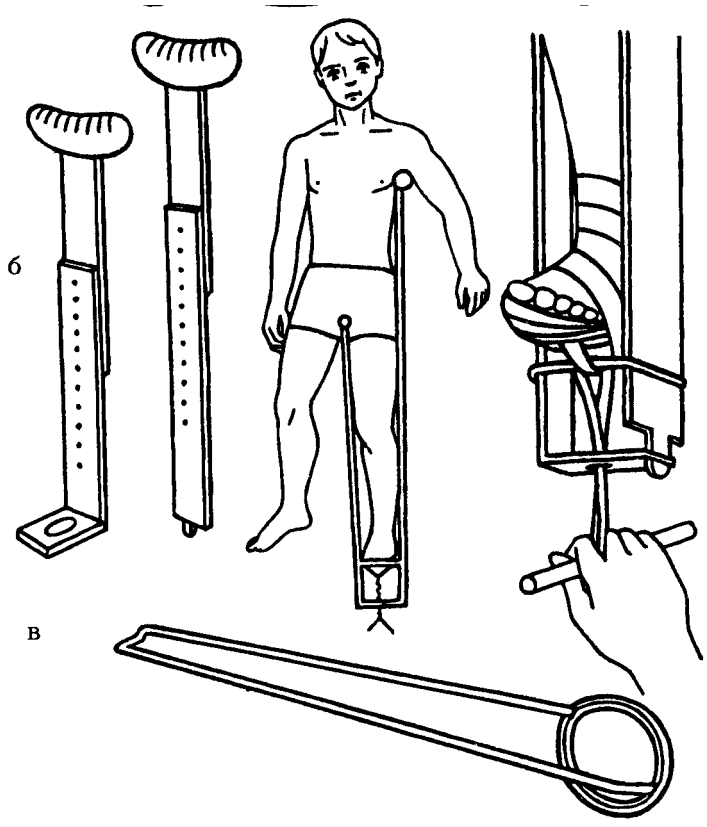


Fig. 6. Diterichs splint overlay.

Diterichs splint is usually placed on top of clothes and shoes. It is collected as follows. The lower ends of the rails are inserted into the brackets of the extensions and with the help of pins that are on the ends of the plates fastened to the

extensions in accordance with the height of the victim so that the emphasis of the external crutch rests on the armpit, and the inner on the crotch and so that the lower ends of the extensions extend 10 - 15 cm. The surface of both stops must be wrapped with cotton and secured with a bandage. A wide bandage 1.5 m long (or a belt) is threaded through the slots in the upper parts of both rails, and a double cord or bandage bands about 1 m long are passed through the metal staples of the foot rail.

Having collected the splint it was applied in the following way. The assistant holds the foot of the injured limb with one hand on top of the rear, and the other from below the heel. Fixed wooden bearing to the soles of the feet (over shoes) gauze bandage 8-shaped bandage, especially strongly reinforcing the rear section of bearing, as this portion represents the main thrust. Then along the body attach the outer rail and extension from the armpit to the ankle, bringing the lower end of the extension through the lateral "eye" of the metal brace bering. Focus lock crutches under my arm with gauze tape, which is pre-dressed through the top slits, and knotted on the opposite shoulder girdle, that is on the healthy side. The emphasis of internal crutch is fixed to the perineum with gauze ribbon, dressed in the slots of the slats, the ends of which are relocating to the thigh (one front and one rear), extend through the slots of the outer rail tight and knotted. Put both rails with extensions and cementing them together fasten outer rail to the body.

The splint is not yet fixed, and start stretching. After installing both of the lower end of the splint (extension), derived from "ears" of bearing 10-15 cm from the latter, relocating the cross bar with the lower end of the inner stands on the protruding end of the external extension. The traction is carried out manually after the injection of the anesthetic (1 ml narcotic analgesic). Gently pulling with your hands foot along the axis of the limb itself until the stops abut under the arm and crotch, and the length of the limb is equal to the length healthy. Further traction is achieved by tightening the cord, which is attached to bearing wand, which is then fixed to the lower crossbar of the splint. Traction should not cause pain to the victim. In order to avoid sagging legs back and give the position a slight bend in the knee joint in the poplitea fossa need to invest a ball of cotton wool. Between the slats and ankles, femoral condyle and greater trochanter enclose cotton-gauze pads, after which the splint is firmly fixed with a bandage, applying a spiral bandage from ankle to axillary region. You can fix the splint in some places (above the ankle, around the ankle, above the fracture, below the fracture site, around the pelvis). In case of simultaneous fracture of the ankles and bones of the foot splint of Diterihs contraindicated.

Pneumatic splint (fig. 7)

To immobilize the hand, forearm, lower leg, foot, knee joint, pneumatic tires are also used.

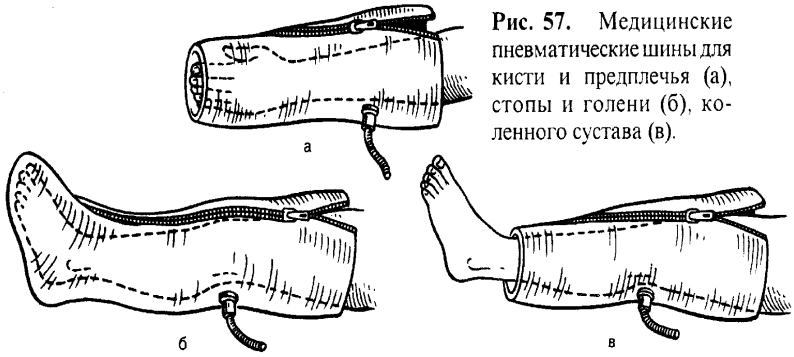


Рис. 57. Медицинские пневматические шины для кисти и предплечья (а), стопы и голени (б), коленного сустава (в).

Fig. 7. Medical pneumatic splint for the hand and forearm (a), foot and lower leg (b), knee joint (c)

Preparation of plaster bandages, splices, overlay and removal

The most common form of hard dressing is a gypsum dressing, which allows you to well fix bone fragments during fractures due to the rapid hardening of gypsum.

Gypsum $CaSO_4$ x $2H_2O$ is a naturally occurring mineral. For gypsum dressings, calcined gypsum is used (when calcined, it loses part of the crystallization water). After wetting, it enters into a chemical compound with water and within a few minutes turns into a solid mass. Medical plaster should have the appearance of a white powder, without lumps, soft when palpated. If lumps come into it, it must be sieved through a sieve. It is necessary to store gypsum in a dry place, as it easily draws in moisture. If the gypsum is damp, then it should be dried - pour it onto the iron sheet with a thick layer and put in a heated cupboard for several minutes at a temperature of 120C.

Indications for the use of plaster dressings

1. Immobilization of fractures.
2. Immobilization of pathologically changed bones and joints.
3. Correction of deformations.
4. Prevention of deformities.
5. Emergency casting.
6. The manufacture of molds and castings of individual parts of the body for the purpose of prosthetics.
7. immobilization as a method of treating burns and crushing soft tissues in the absence of fractures.

Before applying a plaster cast, check the quality of the plaster.

Gypsum quality tests

1. Gypsum and water in a ratio of 1: 1 are mixed and a ball is made; after 7-10 minutes it should harden and not break when falling from a height of 1m.

2. A gypsum slurry is prepared from a mixture of gypsum with water, the consistency of liquid sour cream, which is smeared with a thin layer on the dish, while

benign gypsum hardens after 5-6 minutes when pressed with a finger, the solidification should not be crushed and moisture should not protrude on its surface.

3. Apply a splint made of 2-3 layers of plaster and moistened with water to the wrist or forearm: high-quality gypsum hardens after 5-7 minutes, and when removed from the hand, such a splint does not crumble, keeping its shape.

4. Gypsum is poured into a metal dish and heated on an electric stove. A mirror is held above the plaster. If the mirror is foggy, water vapor is released from the gypsum. Such gypsum is unsuitable for use, as it contains moisture.

5. Mix a small part of the gypsum with water and determine the smell of the gypsum. If gypsum has the smell of rotten eggs - it emits hydrogen sulfide and is not suitable for use.

6. When squeezing the gypsum powder in the fist, it should pass freely between the fingers, and when spreading the fist in the palm, a small amount of gypsum should remain. With such a sample, it is considered suitable for use.

When soaking with hot water, gypsum hardens faster, cold - slower. Usually, water of temperature + 30-35C is used to wet gypsum bandages.

Equipment and tools:

1. Plaster powder (or factory plaster bandage).
2. Gauze bandages.
3. Capacity for bandages.
4. Capacity for water (bowl).
5. Flat tray.
6. Water.
7. gypsum table
8. Cotton wool
9. Protective clothing (adhesive apron, arm ruffles, rubber gloves).

Basic requirements for plaster casts

1. The plaster cast should be applied so as to capture the two joints associated with the broken bone.

2. The material for the plaster cast, lowered into the water, must be in it as long as bubbles are released from it.

3. The same type of gypsum bandage turns must be applied so that each subsequent turn overlaps half of the previous one.

4. Applying a plaster cast should not take more than 10-15 minutes.

5. After the formation of the plaster cast is completed, it is necessary to write the date of the injury, the date of casting the plaster cast and the expected day of removing the plaster, the pattern of the nature of the fracture.

The dressing dries completely in 36-72 hours.

Plaster Bandage Making

Gypsum is poured on the table, the end of the bandage is taken with one hand, and the bandage is unfolded 30-40 cm. The gypsum is evenly poured onto the unfolded part of

the bandage, which is smoothed and rubbed into the bandage with the left palm of the hand. The bandage impregnated with gypsum with both hands is loosely twisted into a roller and shifted, untwisting the bandage by another 30-40 cm, where gypsum has not yet been rubbed. Again they rub gypsum and roll up this part of the bandage. Thus, they continue until the rubbing of the gypsum into the bandage to the end is completed. Made gypsum bandage is put in a dry container.

Plaster cast application

If the dressing is applied with a lining, the limb is covered with a thin even layer of cotton wool throughout. If the dressing is applied without a lining, cotton pads are placed on the sites of the bone protrusions, and the scalp is smeared with petroleum jelly. For a healthy limb, with the help of a gauze strip (from a bandage) measure the length of the area on which the plaster cast will be superimposed and leave it on the working surface. On the surface of the table unfold a factory plaster bandage (or a home-made loosely rolled gypsum bandage) to the length of the measured bandage tape. 6-8 layers are made by adjusting the width of the gypsum strip. Roll the gypsum strip loose from the ends to the middle. Holding the gypsum strip on both sides with both hands, immerse it in a basin of water and hold until the release of air bubbles ceases. After the bandage is completely saturated with water, it is removed from the water with both hands at the ends and squeezed out with a light pressure. The pressed gypsum bandage is placed on the working surface of the table, the heads are turned around and smoothed several times with the right hand to form a smooth, uniform thickness surface. The prepared plaster cast is taken at the ends, applied to the immobilized part, attached to the end of the physiological position and smooth the outer surface of the plaster cast. The edges are smoothed, bent outward and made round. After drying, the plaster bandage is bandaged with a gauze bandage.

Applying Plaster Casts with Homemade Plaster Billet

For a healthy limb, with the help of a gauze strip (from a bandage) measure the length of the area on which the gypsum splint will be applied and leave it on the working surface. A gauze bandage is deployed on the table surface to the length of the measured bandage tape. This section of the bandage is poured with gypsum powder, which is smoothed and rubbed into the bandage with the edge of the palm of the left hand. The floor of the impregnated plaster bandage imposes the next layer of gauze bandage, which is likewise impregnated with plaster. At the same time, the width of the spacers is adjusted. Splint is made of 5-12 layers of a bandage impregnated with plaster. Splints are made of blank prefabricated from the ends to the middle. Take the gypsum workpiece from both sides with both hands at the ends, immerse it in a basin with water. The bandage is kept in water until the release of air bubbles ceases. After the bandage is completely saturated with water, it is removed from the water with both hands and squeezed out with a light pressure. The pressed gypsum bandage is placed on the working surface of the table, the heads are turned around and smoothed several times with the right hand to form a smooth, uniform thickness surface. The prepared plaster cast is taken by the ends, applied to the immobilized part. The limbs provide a physiological position.

Smooth the outer surface of the plaster cast. The edges are smoothed, bent outward and made it rounded. The plaster cast is bandaged with a gauze bandage.

Plaster cast application

After removing the bandage from the water, the free end of the bandage is taken in the left hand, and the head in the right hand and begin to bandage. When bandaging, the right hand rolls the bandage all the time, and the left hand smoothes it. Each next round should cover the previous 2/3. In those places where protrusions form, they are cut with scissors, pressed to the surface, which is bandaged and smoothed. All layers of the applied bandage should join together, the dressing should clearly correspond to the configuration of this surface. During bandaging, the limbs give a physiological position. When applying a circular plaster cast, the fingertips are usually left open to monitor the condition of the limb. The plaster cast is bandaged with a gauze bandage.

Removal of plaster casts

To remove plaster dressings, special tools are used: plaster scissors, an electric saw, Wolf nippers, an expander. During the removal of the plaster cast, the immobilized part of the body must remain motionless. Plaster is removed gradually with the cooperation of the patient.

Preparation for the use of Belera splint.

Used for skeletal traction, for immobilization of the lower limb during operations on the vessels of the lower extremities.

Before use, the splint is wrapped with a cloth or bandage to prevent skin contact with metal.

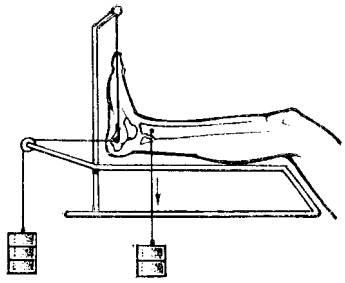


Fig. 9. Belera splint for lower limb

Belera wire guide for the finger is used for skeletal extension and fixation of the finger in fractures of the phalanges. It is fixed with a bandage.

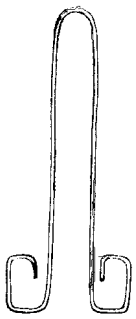


Fig. 10. Beler splint for a finger.

5. Indicative card for independent work with literature on the topic '' Desmurgy ''

Directions	Main tasks	Answers
To learn		
Classification	Classification dressing material	
Types, clinical signs of closed and open injuries	Name the types of traumatic injuries, characterize the main clinical manifestations of different types of injuries	
Volumes of first aid for victims with various traumatic injuries and methods of their transportation	Name the volumes of first aid for victims with injuries. .	

6.1. Materials for self-control.

A. Questions for self-control:

1. Name the types of dressing depending on the purpose.
2. What is the functional position of the limb?
3. Name the classification of dressings.
4. How to apply various hard dressings?
5. The technique of applying bandages to the perineum.
6. Testing the suitability of gypsum powder
7. What types of bandage tours do you know?

B. Task:

1. Put a bandage on your stomach.
2. Put a bandage on the crotch.
3. Put a bandage on the lower limb:

- spiral bandage on the thigh and lower leg;
- turtle bandage diverging and converging;
- 8-shaped bandage on the ankle joint;
- scoop bandage on the heel area;
- a rotary bandage on the foot;
- a spiral bandage on the first toe;
- bandage on the amputation stump of the leg or thigh.
-

C. Tests for self-monitoring:

1. The patient came to the doctor with suppuration of the wound located on the back of the thigh. What bandage should be applied?

1. circular;
2. spiky;

3. cap;
4. spiral;
5. cruciform;

2. A patient with dislocation of the shoulder must be given first aid. What bandage does he need to apply?
1. bandage;
2. kerchief;
3. gypsum;
4. spike-like on the shoulder;
5. special;

3. For bandaging the heel use a bandage:
1. turtle;
2. circular;
3. T-shaped;
4. creeping.

4. If each subsequent round of the bandage covers the previous one by 1 / 2-2 / 3, then this bandage is called:
1. creeping;
2. circular;
3. spiral;
4. Special.

5. The eight-shaped bandage can be used for bandaging:
1. ankle joint
2. the back of the neck;
3. the middle third of the thigh;
4. boundaries of the shoulder girdle;
5. The main phalanx of the first finger of the brush.

6. A T-shaped dressing is used for diseases and injuries in the area of:
1. chin;
2. nose
3. crotch;
4. axillary area.

7. A bandage is applied to the thigh stump:
1. T-shaped;
2. eight-shaped;
3. sprained
4. returning;
5. spiral.

8. fixed dressings:
1. tires;
2. gypsum dressings;
3. apparatus for stretching;
4. kerchief bandage;
5. spiky bandage.

9. Fixed dressings are used for:
1. temporary immobilization of various parts of the body
2. treatment of injuries of the musculoskeletal system;
3. treatment of bone and joint diseases:
4. protection of wounds from the environment.

10. A soft bandage on the limb impose:
1. from the periphery to the trunk;
2. from the trunk to the periphery;
3. The location of the first round is irrelevant.

6.2. Tests and tasks to verify the initial level of knowledge

1. A woman came to you due to the fact that she is worried about pain in the right knee joint. 7 hours ago, in the outpatient clinic, a bandage was applied to the infected abrasion of the knee joint after treatment. On examination, a slight cyanosis of the right lower leg and foot, swelling of the saphenous veins is determined.
What happened?

2. The patient is 68 years old, on the inner surface of the lower third of the right lower leg there is a trophic ulcer 1.5 * 2 cm in size with a necrotic bottom, flushing of the skin and soreness around. The ulcer is treated with a solution of antiseptic, dried, covered with a napkin with Iruxol ointment. What reinforcement dressing do you apply?

3. The patient due to varicose veins of the saphenous veins in the stage of subcompensation underwent venectomy of the large saphenous vein on the right thigh and lower leg. Wounds are sutured, treated with 1% iodonate solution, covered with napkins. What bandage to put on the lower limb to secure the dressing?

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The distribution points are awarded to students:

At mastering topic number 2 to module 1 for training activities for students rated a 4-point scale (traditional) scale, which is then converted into points as follows:

rating	Points
5 (excellent)	5
4 (good)	4
3 (satisfactory)	3
2 (poor)	0

Guidelines prepared
assistent, Department of General Surgery
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