MINISTRY OF HEALTH, UKRAINE

NATIONAL MEDICAL UNIVERSITY

Named after O.O.BOGOMOLETS

Department of Traumatology and Orthopaedic

Traumatology and Orthopaedics
Manual for students and practical doctors

Kiev-2010

A manual for students and practical doctors of medical faculties in traumatology and orthopaedics is developed in accordance to the program ratified by the Ministry Of Health of of Ukraine.

Purpose of manual: subsequent perfection of clinical thoughts, mastering and working of practical skills, making of systematic approach in clinical practice. In this manual there are questions laid out for self preparation from each and every topic, tests of previous and final control tests, the developed case histories to every practical doctor. In addition, there is an «Information Block», in which there is the newest data in speciality, recommendations in relation to the patients, list of important practical skills. The student must grasp the material during all practical cycles in orthopaedics and traumatology.

This manual has been prepared by the teachers of department of traumatology and orthopaedics of the National Medical University named after.O.O Bogomolets ,head of the department, professor A. A. Bouryanov, The honoured worker of science, twice Laureate of the State prize of Ukraine professor Yevgen T. Sklyarenko, doctor of medical sciences professor I Y. Drobotoun, doctor of medical sciences professor A.I. Voloshin, candidates of medical sciences I. A Cravchouc and A. A. Feodorav, M.A Zadnichenco and I. P. Greek.

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Executable educational code from traumatology and orthopaedics

1. Purpose of teaching:

1.1. Adequate knowledge necessary for the students for the prophylaxis of traumatism and orthopaedic diseases, organization of traumatological and orthopaedic help in Ukraine, methods of inspection, diagnostics and medical treatment of patients with the disorders and injuries of the musculoskeletal system, restoration of capacity and determination of labour prognosis.

2. Tasks:

2.1. A student must know:

organisational structure of traumatological and orthopaedic help in Ukraine, history of development of traumatology and orthopaedics;

anatomy of musculoskeletal system;

clinico-laboratory indexes of diseases;

tactic of conduct of patients;

modern classification, etiology and pathogenesis of diseases and injuries of musculoskeletal system;

clinic and methods of medical treatment of the most widespread diseases and injuries of musculoskeletal system;

basic positions of rehabilitation, terms of mobilization and disablement, reasons of disablement;

pharmacological therapy influence on the organism of medical preparations, physical therapy and biological procedures, principles of medical physical education;

basic stages and method of conduction of the planned and emergency operations, questions of aseptic and antiseptic, general and local anaesthesia.

2.2 Student must be able to carry out the inspection of patients with the diseases and damages of musculoskeletal system (reviewing, palpation, measuring, estimation of radiological, laboratory and other data), to set an initial diagnosis and conduct differential diagnosis with similar syndromes, to give immediate medical help at the injuries of the musculoskeletal system, to apply transport immobilisation standard and at the site of accident, to give local anaesthesia in bone fracture and injuries of joints; preparation of plaster cast material and impose different types of plaster cast bandages, to conduct patients with plaster cast, to take off plaster cast; to impose and take off skeletal self-control; to remove dislocation of shoulder, forearm, thigh, foot; to conduct reposition of wreckages at the break of radial bone in its typical place, break of humeral bone in the region of surgical neck, puncture of knee-joint; to arrest the bleeding, bandaging, to assist in operation; to carry out redressing and correction of deformations in CTEV, Muscular Torti Colli,

Dysplasia of hip joint, imposition of fixative bandage and orthopaedic wares after the removal of deformation; to carry out examination of temporary and permanent disablement and rehabilitation of patients.

3. List of disciplines pointing out on sections mastering of which is needed for the study of traumatology and orthopaedic.

3.1. Normal anatomy: osteology, myology, syndesmology structure of joint.

3.2. Pathological anatomy: inflammation, degenerative-dystrophic process, specific inflammatory processes (tuberculosis and inf.).

3.3. Histology: structure of bone and cartilaginous tissue and physiologic regeneration of bone tissue.

3.4. Radio-therapy and radiology: age-old features of the skeleton, radiological image; radiological examination of skeleton; sciagraphy semiotic of diseases and damages to the skeleton, radionuclide methods of diagnostics of diseases of musculoskeletal system.
3.5. Operative surgery and topographical anatomy: operative .Approach to the large joints, topography of vascular-nervous formations of extremities, amputation and exarticulation, surgical tool.

PART 1

«Method of inspection of Orthopaedics and Traumatological patient».

Entry. on the basis of inspection of orthopaedic-traumatologic patient the fixed general-clinical methods of inspection. However the specific of orthopaedic diseases and clinic of traumas require definite knowledges.

Basic literature:

1 Yomashev G. S. Traumatology and orthopaedics.- : Medicine, 1983.

2 Troubnicov In. F. Traumatology and orthopaedics.- C. : «higher school», 1986.

Additional literature:

I. Marcs In. O. clinical examination of orthopaedics patient - :Medicine, - 1079. :

2. Textbook of man anatomy.

3. Textbook of radio-therapy.

General purpose: to be able to collect anamnesis from patient independently taking into account a mechanism of traumas, and in orthopaedic patient- with the features of dynamic of disease, clinical and radiological to expose that or other deformation of musculoskeletal system. On the basis of aggregate of signs, taking into account radiological and laboratory data to diagnose and draw up a plan of conservative and operative medical treatment.

Concrete purposes: to capture the methods of inspection of spine, hip, shoulders, upper and lower extremities, considering the organs of support and movement in interconnection with each other as a sole functional system of an organism of man; to expose basic deformations of trunk, extremities; to measure the length of extremities by means of a measuring tape and determine the anatomic, relative and functional shortening; to determine the volume of mobility in the joints of extremities by means the goniometry; to interpret sciagrams and laboratory test.

Program for Self preparation of students to practical work.

Task 1. For verification of initial level of knowledge give, answers for such questions:

1. to learn the common rules of inspection of patient.

2. What are the features of inspection of orthopaedic and traumatological patients?

Task 2. On the basis of basic and additional literature answer in written form for such questions:

To learn the features of inspection at the traumatic damages and orthopaedic diseases of spine.

What radiological`changes we look for in bone fractures and orthopaedic diseases of spine (scoliosis,kyphosis, congenital spondylolisthesis e.t.c)

What reference points it is needed to pay attention at the inspection of patients. what acted with the injuries and orthopaedic diseases of shoulder trunk,upper and lower extremities?

What radiological signs of bone fracture of shoulder trunk, upper and lower extremities (types of typical displacements of bone fragments)?

What radiological signs at the orthopaedic diseases of shoulder trunk, upper and lower extremities?

What laboratory methods are needed for the inspection of orthopaedic-traumatological patients?

Program of independent work of students for practical doctors. Task 3. Approach to a patient with limb injury

To capture the successive receptions of clinical inspection of Orthopaedics & Traumatological patients.

To learn to conduct the review of orthopaedics-traumatological patient.

To learn to palpate the patients with the injuries and diseases of organs of locomotor system.

To learn the percussion and auscultation of the diseases of organs of locomotor system.

To learn to determine the volume of active and passive movement in the joints of upper and lower extremities.

To study to determine the volume of mobility of different parts of spine.

To learn to measure the lengths of extremities and separate segments.

To learn to determine the strength of separate muscles.

To know description of separate types of step.

10.Interpretation of x-ray and data of laboratory researches.

Execution sequence:

1. During taking of anamnesis to pay attention to beginning of disease at an orthopaedic patient or on the mechanism of trauma in the patient.

2. review to determine the features of movement and self-service, position of trunk and extremities at movement, at rest, axial correlations of trunk and extremities, presence of deformations that their description.

3. In palpation to define: local temperature, turgor of tissues, localization of pain, pathological mobility, presence of edema, accumulation of liquid in a

joint cavity, redness of mutual relations of bone appearances (line Rozer-Nelatona, Shumakera, Marcsa, triangle of Briana, Gyotera) disorder of sensitivity, the state of reflexes.

4. Measure possibility of active and passive motions in joint extremities, spine, to define amplitude of mobility in them.

5.Measure the length of extremities on the whole and separately by segments.

6.Interpretation of x-rays and laboratory researches.

7.Make diagnosis and plan of medical treatment.

Task 4. For the control of capturing your material of practical doctors decide such tasks:

1. you conducted measuring of lower extremities at a patient. Anatomic length: by segment measuring of both thighs and Legs identical; at measuring of relative length the difference of right lower extremity is exposed on 5 cm. What reasons lead to the origin of a similar difference?

2. A patient 14 years old, there is a congenital dislocation of femur, the step is diving. What cognitive lines and measurings will give us the grounds clinically to put the diagnosis of dislocation of femur?

3. At measuring the volume of mobility in a knee-joint you got data: bending upto 90 degrees, unbending upto 160 degrees. How is such setting, its variety named, close the origin of pathological options in joints?

4. At the review of patient a corner between the axis of thigh and leg is opened outside. How such deformation in the region of knee-joint is is named (the Latin name)? and as to define her?

5. At the review of patient a corner between the axis of thigh and leg is opened inward. How is such deformation (the Latin name) named and as to measure her?

6. A patient cannot walk, movement in knee-joints are absent, pathological options in them under the corner of 145 degrees. what are such pathological options named? Close their origin?

7. At the review of patient (at loading) foot is twisted and deviated together with the heel outside. what is the name of deformation (the Latin name)?

8. At a patient as a result of illness were spared hold and nip grasping movement. What types of grasping of hands are absent?

9. At a patient as a result of wrong growing break of bone of leg there was deformation with the corner opened ahead. how is deformation named and determined?

10. At a patient as a result of wrong growing break of bone of leg there was deformation with angle, opened backwards. How is deformation named? How to determine the deformation ?

Block of information.

1. In anamnesis of orthopaedic patient it is necessary to pay attention to heredity, features of beginning and development of disease which was conducted conservative and operative medical treatment. At traumas - on the mechanism of trauma and character of injuring object, medicine and medical help before definite care in hospital.

2. The review of orthopaedics-traumatological patient must be conducted in the bare state, as violation of function of one organ unavoidable conduces the functions of all Musculoskeletal system to violations (shortening of lower extremity after the break conduces to the fixed defect of pelvis, compensate curvature of spine, limping and itc.). At a review it is necessary to distinguish three basic states of patient:

à) Active b)Passive (passive hanging down of hands at the break of humeral bone with the damage of radial nerve). in). Forced (at dislocations of neck segment of spine, patient holds the head in inclined position, supporting it by hands).

3. At the review of patient it is needed to define such types of step:

sparing (at a pain syndrome), merciless (lameness at shortening of extremity or ankylosis), paralytic, spastic. Palpation allows to determine the temperature, turgor of skin, dryness or moistness, character of the slight swelling, its mutual relations with surrounding tissues, presence of liquid in a joint, fluctuation in abscesses.

By the tip of fingers determine local pain (at the breaks, epicondylus, epiphysiolis without displacement). At bimanual palpation mobility, mutual relations of bone appearances and etc.

4. Determination of amplitude of movement in joints:

Amplitude of active movement which gives most pain is determined at first, after it - volume of passive movement. Measuring are conducted by the help of gonometer. Branshi are set on the axis of segments, that form a joint, and an axis to the gonometer is disposed in relation to the axis of motion to the joint. Initial position for hip and knee joints-180 of degrees (position of joint at free vertical position of trunk and extremities). Motions in a frontal plane adduction, and sagittal plane- flexion and extension, about the vertical axis of extremity - external or internal rotation. Violations of mobility are characterized: by the complete no gap in a joint (bone ankylosis), tight gap (tissue ankylosis), by limited movement in joints in one plane (contractures).

Vicious options of extremities or their segments can be concordant, that is functionally comfortable, for which patients can move by means of crutches, sticks and discordantness, for which patients are not able to move with crutches even.

5. Determination of muscular force:

Next to the amplitude of movement, muscular force is determined subjectively after force of resistance which is done to the patients by the researcher. Estimation is given by the 5-mark system:

5 - marks - muscular force is normal, is determined by complete volume of mobility of sound extremity and external resistance;

4.- marks - muscular force is good, the complete volume of mobility of sound extremity and insignificant external resistance is provided;

3 – marks - the muscular force is satisfactory, the complete volume of mobility of sound extremity is provided, but without external resistance;

2 marks - muscular force is unsatisfactory - the complete volume of motions is provided with the external help;

1 mark - bad muscular force, absence of function, but at palpation contraction of muscle is felt;

O marks – zero muscular force, absent function, in palpation absent contraction of muscle.

6. Measuring of volume and length of extremity.

Measuring of length of the damaged extremity takes place in comparison with the healthy extremity. Bone appearances are optimum points for measuring. Such types of shortening are distinguished:

1. Anatomic shortening. It is measured by segments: length of thigh from a large tubercle to the joint crack of knee-joint; length of leg - from the joint crack of knee-joint to the apex of lateral malleolus; length of shoulder - from the tuberculum major of humeral bone to the apex of elbow olecranon; forearm - from the apex of elbow olecranon to the processus styloiedeus of ulna, forearm).

2. Relative shortening (length of upper extremity - from the processus acromion of shoulder-blade(scapula) to the ulnar styloid of cubital fossa; length of lower extremity from anterior superior spine of iliac bone to the apex of medial malleolus).

3. Functional shortening - distance from the surface of foot to the floor(calcanus), which is determined by means the marked supports. She consists of sum of the anatomic and relative shortening. At appearance of atrophy, edema of joint, conduct measuring of volume of the both damaged and healthy extremity on symmetric areas identically remote from bone appearances, that allows to watch after their dynamics.

4. Roentgenologic research has the important value for the inspection of orthopaedics-traumatological patient in clarification and substantiation of diagnosis. Roentgenologic research is conducted in two projections: front-back and lateral. In difficult diagnostics cases (initial stages of osteohondropathy; bone-joint tuberculosis) the comparative roentgenologic pictures of affected and healthy joint or segment of extremity are conducted. At the fracture of tubular bone a roentgenologic picture must be done with fascination of the joint located nearer to the fracture, and at the fracture of two bone segment (forearm, shin) - it is necessary to take two contiguous joints.

5. A presence in shade of bone of lines of break and displacement of bone fragments is the basic roentgenological signs of fracture. Displacements of wreckages are distinguished on length, width, displacement under an angle and at periphery, which relies on an injuring factor and contraction of muscles after the break.

7. Laboratory research

Except for common researches, it is widely used in orthopaedics-traumatologic practical physiology, biomechanics and morphological researches.

Control questions:

The I Account features of clinical review of orthopaedics-traumatological patient.

2. How are measuring of amplitude of mobility of joints of Upper and lower extremities are conducted?

3. What types of shortening of extremities do you know and the methods of their measuring?

4. Role of roentgenologic inspection in diagnostics of breaks and orthopaedic diseases.

EMPLOYMENT 2

«Congenital Torticollis. Congenital Talipes Equino Varus(CTEV)

Entry: Congenital torticollis is diagnosed in 2% all new-born and made to 3 % of odontogenic anomalies of development, more frequent in girls. In defects of early medical treatment, and also asymmetry of person's development at his late beginning, irreversible changes of elements of facial skull, additional cavities of nose, auditory apparatus, and in future - in the neck region of spine. Early, since neonatal, conservative medical treatment leads in most cases to curing and warns a necessity in surgical interference.

A typical congenital flat feet meets in 0,1 % of all new-borns, quite often bilateral, more frequent at boys. In default of medical treatment early, since neonatal, there are the pathological changes in a skeleton, capsulo-ligament and tendon-muscular apparatus of foot, leg, knee-joint. It requires in 75 % patients to use surgical medical treatment.

Basic literature:

And Yomashev G. S. Traumatology and orthopaedics.- : Medicine, 1983.

Smirnova L. And., Shoumada I. V. Practical classes of traumatology and orhtopaedics C : «Zdorovúya», 1984, 352ñ.

Additional literature:

1. Textbook of human anatomy.

2. Textbook of radio-therapy. .

3. Volcov In., Dedova In. D. Detscaya ortopediya.- M.: Medicine, 1972.

Before you start
General purpose: to be able to diagnose independently clinical diagnose a Congenital Torticollis .Congenital Talipes Equino Varus(CTEV), to conduct differential diagnostics with similar diseases and syndromes. To appoint medical treatment depending on the age of patient and degree of deformation, to determine the prognosis.

Concrete whole employments:

1. To capture diagnostics of congenital defects of development, that more frequent all meet at new-born -«Congenital Torticollis. Congenital Talipes Equino Varus(CTEV)

2. To define the methods of complex medical treatment of congenital defects of development beginning with the period of neonatal taking into account age, degree of deformation, concomitant diseases.

3. To capture practical skills of correction of deformation and methods of fixation of the attained correction.

4. To know testimonies to surgical medical treatment and his principles.

5. To capture differential diagnostics of Congenital Torticollis.Congenital Talipes Equino Varus(CTEV)with similar diseases.

6. To familiarize with possible errors, complications in default of medical treatment or during its wrong conduction.

Program of independent work of students to practical employment.

Task 1. For verification of initial level of your knowledges from normal anatomy give an answer for such control questions:

1. Places of begining, attachment of sternocleidomastoid muscle and its function?

2. What anatomic structures surround this muscle?'

3. Which bone form ankle joint and skeleton of foot?

4. What motions are possible in an ankle joint, talus-calcanus joint, the Shopara and Lisfranca joints? Which ligament strengthen the ankle joint and other joints of foot?

Task 2. On the base of study of literature from the theme of employment give in written form the answers for such questions:

I. what is the congenital torticollis disease?

2. What signs of congenital torticollis is seen at inspection and palpation of new-born?

3. The conditioned origin of this lack of development?

4. What signs of congenital torticollis is seen at inspection, palpation, functional inspection of the children from 2-3 years?

5. What excellent clinical signs:

a) cervical ribs

b) syndrome Shprengelya

c) syndrome Clippel-Feylya?

6.from which age the correcting gymnastics is appointed in at torticollis and who conducts it?

7. What methods of fixing of head are applied in congenital torticollis after correction taking into account the age-old features?

In What position the head is fixed in congenital torticollis:

a) right side;

b) left-side;

c)both side

9. Till what age conservative medical treatment for torticollis are conducted?

10. what the essence of surgical medical treatment of congenital torticollis (for T. S. Zatsepinim)?

11. What methods of fixing and medical treatment are used after surgical intervention?

12. What complications arises at inefficient medical treatment or its absence?

13. What basic elements of deformation of foot at a typical CTEV? Describe essence of every element.

14. What changes take place in the ankle joint and each of elements of deformation?

15. What excellent clinical signs:

à) the adducted foot;

b) artrogripos deformations;

c) paralytic deformation of foot?

16. In What age the correcting gymnastics in CTEV begins from? What sequence of correcting manipulations? Who conducts it with what periodicity?

17. What method of fixing of foot at correction of CTEV from 1 month (sketch a chart)?

18 Who conducts correction of CTEV at children (older than 1 month, what method of fixing is used with what periodicity?

19). Which existing testimony and in what age are proposed to surgical medical treatment, if to take into account that only a 25% CTEV is fully cured by conservative methods?

20. What principle of surgical intervention at a CTEV? What anatomic structures the manipulations are executed on? Their essence and purpose.

21. What features of shoe must be after conservative or surgical medical treatment of CTEV?

22. What complications, except for septic, can arise up after surgical medical treatment of CTEV?

23. What anatomico-biomehanical changes of lower extremities arises at patients with a CTEV, that did not treat oneself?

Program of independent work of students. for practical work.

Task 3. Microcuration.

1. To capture practical skills of inspection of children with congenital torti colli and CTEV.

2. To conduct differential diagnostics.

3. Taking into account age, anatomical and physiological features of patient, to the degree of deformations to draw up a plan of medical treatment.

4. To capture practical skills of orthopaedic correction of
Congenital Torticollis and CTEV and facilities of their fixing.

Execution sequence:

1. During collection of anamnesis to pay attention to heredity, course of pregnancy and labour, preceding diagnostic and medical measures.

2. Review: method of movement, features of step, new-born position on bed. Symmetry of facial and cerebral skull, positions of head relatively shoulders, contours of neck, identical of length and heights of location shoulder; form of thorax, feature of its structure, axial deformations of lower extremities, form of leg and feet, expressed of physiology curvatures of spine and level of location of shoulder-blades(scapula). Study of shoe: features of design and wear.

3. Palpation: to define tone of muscles of neck on either side - at rest, at movement of head, to expose limitation of motions, presence of unusual bone educations, compression of soft tissues. palpation of shoulder-blades to define their level of location, distance from the line of processus spinosus of vertebrae. During deformation of foot to define the degree of deformation, features of the loaded surface.

4. Formulation of diagnosis and conducting of differential diagnostics.

5. substantiation of medical treatment.

6. Mastering of practical skills from correction of deformation and method of fixing.

7. Ground of clinical data and demonstration of practical skills to the teacher, participation in the discussion of theme of practical work by each other.

Task 4. For verification of the capturing your program of practical employment decide such tasks:

The I.parents of children of three-week age paid attention, that the baby’s head is constantly inclined to the right. A district paediatrician exposed that under subcutaneous tissue feel tumor like process by palpation from the right side of neck, the contours of neck from this side are sharply smoothed out.

What Disease can be suspected?

What diagnostic and medical measures need to be conducted?

2. On the ambulatory reception by an orthopaedician at a six-month child the diagnosed bilateral talipes equino varus. In addition, it is exposed, that knee-joints at a child are unbended, absent active and passive motions in them.

à) What disease can be suspected?

á) What pathological signs of this illness?

â) What medical treatment must be appointed?

3.one and half month child umbilical hernia appeared with CTEV. How to treat a CTEV in such case?

Block information.

Principal reasons of congenital anomalies of development of musculoskeletal system.

The I.External factors:

1. Mechanical: shortage of water, amniotic accretion, extopic or multifetus pregnancy, damage by helping in labour (imposition of forceps, vacuum extraction).

2. Physical: low (high) temperatures, vibration, x-ray rays, ultra rays, radio-active radiation.

3. Chemical: alcohol, sulfonamides, salts to thallium, lithium, magnesium, cobalt, iodine.

4. Infectious diseases: German measles, toxoplasmosis.

6. Avitaminosis, albuminous starvation.
II. Endogenous factors
1 the congenital lacks of development of uterus, endometritis, tumours of uterus, early gestosis in pregnancies.

2.Hypertensive disease, rheumatic heart-diseases.

3.hormonal disorders: saccharine diabetes, taking of corticosteroids.

4. Age of parents.

5. metabolic Disturbances: enzymic, protein, carbohydrate lipid, minerals
GENETIC FACTORS
1.Hereditory pathological signs (syndromes, illnesses) of parents and their nearest relatives (violation of chromosomal complex).

2. Violation in an embryonic period.

3. Violation in the period of development of fetus.

Necessary coincidence of action of exogenous factors with the periods of embryogenic or in a neonatal period.

Employment 3

«Dysplasia of hip joint. Congenital dislocation of femur».

Entry. Among the congenital anomalies of development of locomotor apparatus often there are dysplasia of hip joint (to 3% among all new-born) and congenital dislocation of thigh 0,016 %). Early, in a maternity hospital and in the first months of development of newborn, diagnostics of dysplasia and knee dislocation of thigh, to its timely skilled medical treatment leads in 95 % cases to the complete cure. Late diagnostics and treatment, begun at the children of senior age groups, the complete cure is rarely observed, that later results in development of the secondary degenerative and dystrophic changes in hip joint in youth and in young age, results in disablement.

Basic literature:

1. Yomashev G. S. Travmatologiya I ortopediya - Medicine, 1983

2.Smirnova L.A. Shumada I.V. Travmatologiya I ortopediya - C «Health school», 1986.

3.Trubnikov V.F. And., Shoumada I. V. Practichescie zanyatiya on travmatologii I ortopedii - C «Zdorovúya», 1984, 352 s.

Additional literature:

1.Human anatomy of man.

2.Normal roentgenology of bone and joint system of children.

3.Volkov M.V. Dedova In. D. Childrens ortopedy - M : Medicine, 1972.

Before that, first familiarize with the purpose of practical employment.

General aim- to be able to work independently clinically and roentgenologically to expose dysplasia of hip joint and congenital dislocation of femur in new-born and in children older than 1, to appoint medical treatment depending on age and degree of non development of hip joint.

Concrete tasks of practical work:

1. To define the signs of dysplasia of hip joint at new-born.

2. To define clinically congenital dislocation of thigh in new-born.

3. To appoint complex valuable medical treatment to the sick child with dysplasia and knee dislocation of thigh upto three years of age.

4. To interpret the sciagram of hip joints of children of three years old and at children older than 1 year.

5. To appoint orthopaedic medical treatment to the patient with knee dislocation of thigh from 1 month to 6 months, from 6 to 12 months.

6. To diagnose clinically knee dislocation in children older than 1 year.

7. To appoint orthopaedic medical treatment to the patient with knee dislocation in 1 to 2-3 years.

8. To appoint testimonies and principles of surgical medical treatment of knee dislocation of thigh.

To conduct differential diagnosis with similar diseases.

Program of independent work of students at independent practical work.

Task 1. For verification of initial level of knowledges from a normal anatomy, radio-therapy, give a written answer for such control questions:

1. By what bones are formed the acetabulum?

2. what elements form the skeleton of hip joint?

3. What features of sciagraphic image of hip joint at children under age 1?

4. What muscles:

a) abduct the thigh;

b) flex the thigh;

c) extend the thigh
g) adduct the thigh.

Indicate the places of attachment of those muscles.

Task 2. On the basis of study of basic literature from the theme of employment give a written answer for such questions:

1.What is dysplasia of hip joint?

2.What are the signs of dysplasia in new-born?

3.What are the true signs of knee dislocation in new-born?

4. What amplitude of movement in hip joint in new-born is normal?

5. the conditioned origin of symptoms Marcsa-Ortolani?

6. Purpose:

à) early medical treatment of dysplasia of hip joint;

á) early medical treatment of knee dislocation?

7. What functional medical treatment is appointed at diagnostics of dysplasia, who conducts it, method of conducting and method of fixation of hip joints upto three years old?

8. What functional medical treatment is appointed at diagnostics of knee dislocation, method of fixation of hip joints?

9. What age sciagraphy diagnostics is conducted in (sketch a chart Hilgenreynera from a textbook)?

10. In what age in norm the kernel of ossification of head of thigh-bone appears on a sciagram?

11. What roentgenologic triad they Use?

12. What size of corner of mowed of roof of acetabulum in norm?

13. What id the size of cervico-diaphysial angle?

14. What medical treatment should conduct to the child with dysplasia of hip joints at diagnostics in a 3-4 years of age?

15. What orthopaedic medical treatment is appointed to the children with knee dislocation of children from 6 months, how to control efficiency of medical treatment?

16. What signs of congenital dislocation of thigh at the children of senior age:

à) from anamnesis

b) character of step or claudication in unilateral or bilateral dislocation

c) at inspection from front, from sides, behind

d) at palpation of apex of large tubercle and surrounding bone appearances

e) at measuring of length of lower extremity

f) at measuring of volume of movement in joints.

17. Why at knee dislocation of thigh is appears deviation (crossed) pelvis there and how to define it?

18. Is the apex of large tubercle displacement is higher than linea Rozer Nelatona at dysplasia?

Ï). What types of shortening of thigh arise up at congenital dislocation of thigh and as to define them?

20. Why in congenital dislocation of thigh the volume of rotatory movement in a hip joint is multiplied?

21. What causes the symptom Trendelenbourga?

22. What modern method of medical treatment can be applied at late (in 1-3 years) diagnostics of congenital dislocation of thigh and his advantage on comparison with a method Lorentsa?

23. What testimonies to surgical medical treatment of congenital dislocation of thigh:

à) age

b) noneffectiveness of conservative medical treatment

c) late diagnostics

d) anatomic features.

24. What principles of surgical, medical treatment of knee dislocation of thigh:

à) reconstruction of acetabulum

b) reconstructions of proximal department of thigh-bone.

25. What complications are observed during conservative and surgical (except for septic) medical treatment of knee dislocation of thigh?

26. What the difference of traumatic dislocation of thigh from congenital?

27. What the difference of paralytic dislocation of thigh from congenital?

28. Why during varus deformation of neck of thigh-bone top of large tubercle is higher from the line Rozer-Nelatona?

29. How clinically and rentgenologically distinguish the displacement from congenital dislocation of thigh?

Program of independent work of students on practical work.

Task 3. Microcuration.

1. To capture the clinical and roentgenological facilities of inspection of children with dysplasia and congenital dislocation of (general clinical and orthopaedic).

2. To conduct differential diagnostics with similar diseases of locomotor apparatus.

3. Taking into account age, roentgenologic picture, to draw up a plan of medical treatment of disease.

Execution sequence:

1. During collection of anamnesis to pay attention to heredity, beginning of walking of child, feature of step, subsequent diagnostic and medical measures.

2. Review the position on bed, step. Method of movement, character of lameness. claudication: defect of pelvis, visible shortening and positions of feet, atrophy of soft tissue, appearance of large tubercle. From one side: exposure of lumbar lordosis. Behind: atrophy of gluteal musculature.

3.Palpation: locate the projection of apex of large tubercle to linea Rozera-Nelatona, determination of symptom Dupuitrena.

4. Measuring of relative length of lower extremity and its shortening, anatomic length and shortening and functional shortening.

5. It is measured to the volume of motions in a hip joint and correlation of them with normal parameters.

6. Determination of symptom Trendelenbourga.

7. Interpretation of sciagrams.

8. Differentiation of diagnostics.

9. Planning of medical treatment.

10. Show the clinical and rentgenological data to the teacher and participation in the discussion of theme of practical work.

11 Diagnostic of dysplasia and congenital dislocation of thigh on a plaster cast "doll", sciagrams, charts.

Task 4. For verification of knowledge you have learnt solve such tasks:

1. The parents of child in 8 weeks paid attention, that on a right thigh of her has 4 folds, and) How many folds should be on a thigh of a child and their name?) What authenticity of this sign for diagnostics of disease? What diagnostic and medical measures to conduct?

2. In a maternity hospital neonatologist was exposed, that at bending in knee and hip joints of feet at new-born hip joints are found at a different level, What the exposed sign testifies about?) What diagnostic facilities can be applied for the exposure of illness?

3. In a maternity hospital the new-born is diagnosed as dysplasia of hipjoints, appointed medical treatment, that was conducted, by a mother under surveillance of doctors of policlinic. In threelunar age it is exposed on a sciagram, that the corner of mowed of roof of acetabulum makes 40 degrees to the right and 35 degrees to the left. and) What the indicated signs testify about?) What subsequent tactic of doctor?

Block of information.

1. Dyspalsia of hip joint - this un development of all elements of joint: acetabulum, proximal department of thigh-bone, capsule, muscles, vessels, nerves.

Clinical characteristic of limitation of lifting of thighs in horizontal position of child less than 70°.*

2. Roentgenologic diagnostics of dysplasia of hip joint at children is conducted from threelunar age, when the kernels of ossification of head of thigh-bone and bones of pelvis appear.

Sciagrama presents by itself the following:

horizontal line is drawn through apexes of the Y-like cartilage.

To draw the tangent to the roof of acetabulum - apex of the Y-like cartilage Together with a horizontal line forms an angle Hilgenreynera opened outside, which in norm is equal to 20° (the increase of size of corner indicates on mowed of roof of acetabulum)

perpendicular from the most prominent part of epiphysis of thigh-bone to the horizontal line (height 10-12 mm).

distance from above drawn perpendicular line to the apex of the Y-like cartilage (10-12 mm) (the increase of distance indicates on lateroposition proximal to the department of thigh-bone).

linea Shentona in norm presents itself as a continuous, which is drawn on the upper edge of the piriform? opening and lower edge of neck of thigh-bone.

a line Calve is conducted on the external edge of ilium and upper edge of neck of thigh-bone.

Discontinuity of these lines indicates on displacement of proximal part of thigh-bone in relation to pelvis.

Employment 4

«Degenerative - dystrophic diseases of joints».

Entry.degenerative-dystrophic defeats of large joints - widespread disease of locomotor apparatus, that results in the protracted loss of capacity, and in the row of cases by the reason of disability of patients. The Degenerative-dystrophic diseases strike people in age most capable of working, a tendency to the permanent disability and progress, make near 3 % of all orthopaedic patients (In. S. Cosinscaya, 1961, And. X. Ozerov, 1963, In. N. Gourev, 1975). Knowledge of clinical, roentgenologic diagnostics, principles of conservative and operative medical treatment and prophylaxis of degenerative - dystrophic defeats of joints is the primary purpose of study of one of widespread orthopaedic diseases.

Basic literature:

1. Yomashev G. S. Travmatologiya I ortopediya - Medicine, 1983

2.Trubnikov V.F Travmatologiya I ortopediya - C «high school», 1986.

3.Smirnova L.A And., Shoumada I. V. Practical work on traumatology and orthopedics- C «Zdorovúya», 1984, 352 s.

Additional literature:

1.Ì.Ã. Prives. Normal human anatomy. Parts: Osteology and mycology.

2.Ëûñåíêî???? N. C., Boushcovich In. N. Anatomiya cheloveca. Izd. 6th dopoln., I wears away slave L. «Medicine», 1968.- 815 s.

Before that how to pass to preparation of practical employment familiarize with his purpose.

General purpose: to be able to identify independently clinical and roentgenological expose the degenerative-dystrophic defeats of large joints, to find out the reason of the given pathology, to draw up a plan of the proper medical treatment taking into account the form of stage of process, age, profession, places of residence, concomitant diseases, to set a medical and labor prognosis.

Concrete tasks of employment:

1. To define the clinical symptoms of degenerative - dystrophic defeats of joints (violations of step, limitations of active and passive movement in all planes in joints, types of contractures, presence of shortening of extremities and other symptoms).

2. To interpret the sciagrams of degenerative-dystrophic diseases of large joints of upper and lower extremities.

3. To be able to conduct differential diagnostics with the specific and non specific diseases of joints.

4 to Ground the plan of pathogenetic medical treatment degenerative - dystrophic diseases of joints (conservative and operative) taking into account a form, stage of process, age of sick, profession and concomitant diseases.

Program of independent work of student to practical employment.

Task 1. On the basis of knowledge and abilities, acquired during the study of normal anatomy of man, histology and radiology, physiology, listened lectures and acquired practical skills from traumatology and orthopaedy, give writing answers for such questions:

1. What elements of joint are struck at the degenerative-dystrophic diseases and why?

2. Structure of cartilage and exchange processes in him (schematically to sketch the layers of cartilage).

3. Schematically to sketch axial deformations of extremities.

4. To give determination of «contractures», «ankylosis». Types of contractures, ankylosis.

5. What roentgenological differences of osteoporosis and osteosclerosis?

Task 2. On the basis of study of basic and additional literature from the theme of employment give written answers for such questions:

What main reasons leads to the origin of degenerative- dystrophic defeats of joints?

2. Pathogenesis of degenerative-dystrophic defeats of joints.

3. Basic clinical signs of deformative osteoarthrosis, aseptic osteonecrosis, cystic alterations on different stages of process.

4. What roentgenologic signs of degenerative -dystrophic defeats of large joints depending on the form, stages of process (schematically to sketch the stages of process at deforming arthrosis)?

5. What methods are used at medical treatment of degenerative -dystrophic defeats of joints taking into account the form, stages of process?

6. Expose essence of conservative medical treatment:

à) orthopaedic;

á) medicinal;

â) physical therapy;

ã) balneological.

7. Testimony, basic principles of operative medical treatment of degenerative - dystrophic defeats of joints taking into account the etiologic factor of disease?.

Program of independent work of students on practical employment.

Task 3. Microcuration.

1. To capture practical skills of inspection of orthopedic - traumatological patient at the -diseases of joints.

2. To capture practical skills of clinico-roentgenologic diagnostics of deformative osteoarthrosis, to conduct differential diagnostics of degenerative-dystrophic diseases.

3. To capture knowledge of basic modern methods of medical treatment of degenerative-dystrophic diseases.

Sequence of action:

1. In taking of anamnesis to pay attention to heredity, character of labour, development of children, on a prophylaxis and medical measures. To expose unfavorable professional and other concomitant factors.

2. Review: to define the character of step, type of lameness and axial deformations of extremity, violation of configuration of joints, hypotrophy and atrophy of soft tissues.

3. Palpation: to define the places of severe pain in the region of large joints and surrounding tissues, presence of free liquid in a joint, skin temperature (general and local).

4. Functional inspection:

à) to determine length and axis of upper and lower extremities (anatomic, functional and relative shortening);

á) to determine the volume of active and passive motions in the joints of upper and lower extremities in norm and in the disease of joints;

â) Types and character of contractures, ankylosis;

b) to be able to measure valgus and varus deformation of upper and lower extremities.

5. To interpret sciagrams at the degenerative-dystrophic defeats of joints.

6. To ground a diagnosis and conduct differential diagnostics.

7. To work out a plan of medical treatment (orthopaedic, medicinal, physical therapy, balneological) and ground him.

8. To give a medical, social and labour prognosis.

To ground a diagnosis, to show the constructed plan of medical treatment to the teacher, to take part in the discussion of theme of practical work by asking questions.

Task 4. For verification of capturing your material of practical employment solve such tasks:

I. In a policlinic the patient consulted with complaints about pain in the left hip joint which increases after the protracted circulation and limitation of movement (extension, adduction). Pain in a joint began after the second delivery. And anamnesis: in childhood the patient treated oneself concerning dysplasia of hip joint, and in recent three years of lumbo-sacral radiculitis. At a review hypotrophy of muscles of the left thigh, limitation of extension of the left lower extremity is determined, shortening of the left lower extremity on 1,5sm in hip joint.

1.How to define the functional shortening of the left lower extremity?

2.How to define the volume of active and passive movement in all planes?

3.Preliminary diagnosis.

4.What additional diagnostic inspection needs to be applied?

5.Final diagnosis and ground of plan of medical treatment taking into account the etiologic factor.

II.A patient consulted a Doctor with complaints on pain in the knee-joint appealed, sharp limitation of motions, violation of step, pain increases during walking and fully disappears at rest. From anamnesis it is found out, that during 8 years after the trauma of the left knee-joint a patient did not appealed for help. At a review there is the knee-joint of ordinary form and configuration. At palpation there is a temperature in the region of joint within the limits of norm. Pain is localized along a medial copula, active and passive motions within the limits of norm. On the sciagram of the left knee-joint in front-back projection of narrowing of joint crack, regional bone excrescences anymore on a medial surface, subchondral sclerosis.

1. initial diagnosis?

2. What roentgenologic difference of osteoporosis and osteosclerosis?

3. what diseases of knee-joint it is necessary to conduct differential diagnostics by?

4. Your plan of medical treatment.

III. A patient appealed with complaints about pain in a right talo-crural joint at walking. Works as a longshoreman. It is known, that 2 years the fracture of both bones with displacement happened prior to it. At a review - skin is usual color. At palpation -- local temperature within the limits of norm, limitation of motions in a right joint (back bending) shin-foot at the static loading is multiplied valgus deformation of foot. On the sciagram of right joint (sciagram without the static exertion) shin-foot insignificant narrowing of joint crack, subchondral sclerosis.

1. By what to account for valgus deformation of foot of the static loading and how to define it?

2. Plan of additional inspection.

3. Initial diagnosis and plan of medical treatment.

Block of information.

According to clinico-roentgenologic classification Cosinscoi N. S. but Rohlina And. G. (1961) to the group of degenerative-dystrophic changes of joints: **deformative arthrosis, aseptic osteonecrosis and cystic alteration of bones are taken.**

These forms of degenerative-dystrophic process are a basis for the ground of tactic and method of medical treatment taking into account age, floor, profession of patient and form of disease.

More frequently meets deformative arthrosis.

In connection with one-sided study of pathogenetic links of this pathology there are some differences in terminology. Generalizing large experience of medical treatment of dystrophic-degenerative diseases of joints from positions of systems approach Is. T. Sclyarenco offered classification of deformative arthrosis:

1 stage – pre athrosis. Patients reveal complaints about the unpleasant feeling, aching pain in a joint at the overload. All of them quickly disappears after rest. Objectively characteristic limitation of extension in a joint (a symptom Is. T. Sclyarenco) or limitation of external rotation in spherical joints. Roentgenologic pathological changes are not determined.

2 stage - arthrosis. limitation in a joint at the physical overload is characterized, by limitation of maximal amplitude of motions, «starting pain» appears. Roentgenologic narrowing of joint slit is determined, macula osteoporosis appears.

3 stage - osteoarthrosis. Complaints about pain at movement, limitation of amplitude of active and passive movement in a joint. Appearance of flexor contracture of joints, hypotrophy of extensor muscles. On a sciagram the considerable narrowing of joint crack, deformation of joint surfaces, bone-cartilaginous excrescences, diffuse osteoporosis, and subchondral sclerosis, is determined.

4 stage - arthroso-arthritis. Process progresses, pain takes a permanent character, considerable atrophy of muscles appears, extremity on a side is staggered. Acquire a permanent position,forms flexor-adducted contractures, external rotation of extremity, little mobility in a joint). Roentgenologically determined sharp narrowing of joint slit, due to destruction of cartilage and bone excrescences, reactive sclerosis, osteosclerosis, cyst like new growth in the head of thigh-bone. It is possible for subluxation at the hyperplastic forms of coxarthrosis.

Classification of aseptic necrosis of head of thigh-bone.

1 stage - stage of the initial phenomena. Clinically characterized by non-intensive pain which increases in exertion. Limitation of internal rotation is determined only.

Roentgenologically it is possible to look for violation of structure of bone tissue of head as hearths of osteoporosis and osteosclerosis.-

2 stage - stage of compressive fracture. Transition in a 2 stage is accompanied by appearance of intensive pain from the compressive fracture of head. In subsequent pain becomes less intensive and increases in exertion. Movement in joint is sharply limited externally, internal rotation and extension.

Roentgenologic signs: expansion of joint slit; head of thigh-bone - contours are broken due to an compressive necrotic focus in anterosuperior part which most loads up, focus necrosis differentiates distinctly due to increased roentgenologic density around the area of osteolysis and reactive sclerosis.

3. stage - stage of secondary arthrosis. Pain is intensive, permanent, diminishes at rest.

Motions are limited in all three planes, appear flexor-adductive contractures.

Roentgenologically regional bone excrescences appear, uneven narrowing of joint crack, the changes of contours of head are determined. Focus of necrosis differentiates distinctly, surrounded by the area of osteolysis and sclerosis.

4. stage - stage of output.

Intensive, permanent pain is determined. Movement in joints are absent or sharply limited, expressive flexor-adductive contracture.

Roentgenologic signs:

acetabulum is deformed, considerable regional bone fragments are determined, Joint slit is narrowed significantly. saddlelike deformation of head, there are considerable regional bone excrescences.

The focus of necrosis is fragmented, sclerosis, the width of areas of osteolysis and osteosclerosis is diminished.

In cystic alteration of epiphysial area cysts are selected:

1. stage - origin of single cysts - shadow of the rounded form in the epiphysial area of bone;

2. stage - expansion and confluence of cysts in a focus;

3. stage - breach of cysts in a joint cavity, deformation of joint surfaces.

Osteonecrosis and cyst like alterations select five phases of clinico - roentgenologic changes of aseptic necrosis (see table.).

Clinico-roentgenologic changes of aseptic necrosis and cyst like alteration. Phase of process. Clinical symptoms. Roentgenologic data.

I phase. Limited extension in a hip joint. In the region of head of thigh-bone an area with unclear contours is determined, keel like or segmentary forms symptom E.T.Sclyarenca).The area of lightening with unclear contours is marked, not rarely regular shape - beginning of formation of cyst.

The II phase. Absence of extension in a hip joint. Around the cell of compression it is visible strip of lightening (demarcated area) and, quite often the expressed reactive sclerosis there is a cyst usually wrong form Expressed limited.

The III phase. Permanent pain in the region of hip joint, violation of movement at least limitation of motion. It is determined by incongruence of joint surfaces due to a compression or bulging of necrotic area. Last diminished in a size, around the area of shadowing a reactive sclerosis is determined; a joint slit is some what narrowed. There is the increase of cyst in sizes, sometimes it is visible alteration and crack of its wall up to the extent that it bursts into joint, joint cavity and joint slit is unchanged.

The IV phase. Strengthening of pain in the region of hip joint with an irradiation in the area of knee-joint, reduction of amplitude of motions, appearance of contractures, hypotrophy of muscles. The cell of necrosis as a compression, incongruence joint surfaces is marked, regional bone excrescences on a head, narrowing of joint crack. At tearing away of necrotic area free bone-cartilaginous bodies in the cavity of joint, bulge of cortical layer of the most loaded surface. Flattening of head on the limited area (as a result of compression of wall of bone), structure it's heterogeneous due to alteration and reactive changes around the bone, regional bone excrescences.

A V phase. Subsequent strengthening of pain, limitation of motions in hip joint, contractures, muscle atrophy. Sharp narrowing of joint slit, that confirms degeneration of joint cartilage, the more the expressed deformation of head and depression with regional bone excrescences. Deformation of head of thigh-bone grows, acetabulum due to regional bone excrescences.

Employment 5

«Inflammatory diseases of joints (arthritis)».

Entry. The inflammatory diseases of joints (arthritis) are widespread on earth. After etiology they are divided into two groups: specific and unspecific. To specific arthritis belong to staphylococcal, streptococcus, brucellosis, tubercular, syphilitic, gonorrheal, dysenteric, septic and others arthritis. Non specific -rheumatic, rheumatoid, infectious-allergic and in.

Rheumatoid arthritis (RA) is the -autoimmune systemic disease of connective tissue, that will be characterized by chronic progression of process with the overwhelming defeat of joints, development of permanent deformations of joints, violation of their function, loss of capacity, severe disablement. More than 1 % population on the earth suffers from RA.

Knowledge of basis of clinical, laboratory, morphological and roentgenological signs of arthritis, differential diagnostics, prophylaxis, principles of medical treatment has the large practical value for medical and social rehabilitation of patients.

The modern methods of complex medical treatment RA allow to considerable no. of patients to restore capacity for self-service or restore partial capacity.

Before that how to begin independent work, familiarize with the purpose of practical employment.

General purpose: On the basis of pathogenesis, clinic, changes of inflammatory processes to master a testimony to application of orthopaedic methods of medical treatment in the complex therapy directed on saving of anatomic form of joints, and also renewal of their function, removal of discordantness contracture and their prophylaxis.

To Know:

1.Classification of inflammatory diseases of joints.

2.Working classification of RA after Is. T. Sclyarencom and character of clinico-roentgenological, morphological changes in joints.

3. Etiopatogenesis of specific and non specific arthritis (RA in particular).

4. Clinical picture of specific arthritis and RA according to stages.

5. Differential diagnostics of arthritis and RA.

6. To be able clinically to inspect sick RA (position abed, their motor vehicle, character of deformations (concordant, discordant), volume of motions in joints.

7. To know the features of roentgenologic changes at arthritis and RA.

8. To be able to form a clinical diagnosis.

9. To draw up a plan of medical treatment in dependence on a stage, activity of process and insufficiency of joints at RA.

Program of independent work of students to practical employment

Task 1. For verification of initial level of your knowledges give written answers (in a notebook) for such control questions:

1. The anatomic structure of joints, their physiology and biomechanics function

2. To light up etiopathogenesis specific inflammatory diseases of joints.

3. What is known about etiology and pathogenesis of rheumatoid arthritis?

4. Account for pathogenetic essence of medical treatment of specific and nonspecific illnesses of joints.

To understand I. What are «non specific inflammatory diseases of joint»?

2. To give determination of contracture joint, to name the types of contractures.

3. To give definition of ankylosis of joint, its kinds.

Task 2. On the basis of the trained literature from the theme of employment for self-control give written answers for such questions:

1. What necessity and testimony for introduction of complex therapy of inflammatory processes of joints of orthopaedic methods?

2. Testimonies and methods of orthopaedic medical treatment at the sharp chronic specific diseases of joints.

3. Classification of defeat of joints at rheumatoid arthritis and pathogenetic application of orthopaedic methods in dependence on the stage of pathological process in a joint.

4. Mechanism of formation of contracture at the specific diseases of joints and rheumatoid arthritis, classification of contractures.

5.Clinical and roentgenologic differential diagnostics of ankylosis.

6.What types of orthopaedic medical treatment are used as medical treatment of specific inflammatory diseases of joints and RA?

7.Principal and tactic of medical treatment of patients with the specific inflammatory diseases of joints and at RA?

8.pathogenetic peculiarities of specific inflammatory diseases of joints and RA.

9. Laboratory diagnostics of inflammatory specific diseases of joints and RA.

10. Social rehabilitation of patients with the specific inflammatory diseases of joints and RA.

Program of independent work of students on practical employment.

Task 3. Microcuration.

By the I. To master the methods of clinical and roentgenological inspection of patients with the specific inflammatory diseases of joints and RA.

2. To be able to conduct differential diagnostics inflammatory specific and non specific diseases of joints and substantiation of diagnosis.

3.Considering the age, stage of disease, to work out a plan and appoint complex pathogenetic therapy, its character and volume.

Execution sequence :

During collection of anamnesis to pay attention to the character of beginning of disease, remoteness, previous use of medications, their efficiency (especially corticosteroids preparations).

Review: position of patient on the bed, steps, self-service, character of deformations of joints, the state of skin covers, hypotrophy of muscles, neurotrophic violation.

Palpation: determination of temperature of skin, presence of liquid in joints (ballotment of patella), character of capsule of joint, pain points, neurological tests.

Measuring of relative, anatomic and functional lengths of lower extremities, anatomic to the landmark and determination of volume of movement in joints.

Primary diagnosis.

Study of sciagrams, given laboratory researches.

Differential diagnostics.

Ground of diagnosis. '

Define principle and tactic of medical treatment (conservative or surgical).

Lecture about a patient on the clinical round of academic group.

Discussion of theme in an educational room.

Task 4. Check up Your knowledges by the decision of situation tasks.

1. A patient 18 years old entered clinic with complaints about pain in knee-joints, slight swelling and limitation of motions. Anamnesis: it is ill near a year. Beginning of disease links to overcooling. At first appeared pain in the shallow joints of hands and feet, did not treat oneself. Four months ago after ORZ appeared pain in knee-joints, slight swelling and limitation of motions. Treated oneself ambulatory, taken brufen, metindol. Medical treatment did not give any effect. Clinically: volume of movement in a spine, humeral, wrist, hip, and also joints of brushes and feet is unreserved. Knee-joints are megascopic in

a volume, contours are smoothed out, positive symptom of ballotment of patella. Motions in them are limited from pain.

Question:

1. Ground a primary diagnosis.

2. What is necessary to conduct the additional inspection for clarification of diagnosis?

3. Differential diagnosis.

4. Your clinical diagnosis.

5. plan of medical treatment.

2. A patient 40 years entered clinic with complaints about pain in the shallow joints of hands and feet, slight swelling, that periodically appeared in knee-joints. Anamnesis: suffers for about 2 years. The disease links to overcooling. Repeatedly treated oneself ambulatory and stationary, the improvement is brief. Clinically shallow joints of hands and feet of ordinary form, motions in them are full. The contours of knee-joints are smoothed out, exudate is not present. Atrophy of quadriceps muscles is marked. In Palpation present bulge of paraarticular tissue. Movement are painful and are limited on 1/3 to the volume.

1. Your primary diagnosis.

2. What additional inspection must be conducted for clarification of diagnosis?

3. Ground a final diagnosis.

4. Work out a plan of medical treatment.

3. The sick 48 years entered clinic with complaints about lameness during walk, absence of the complete flexion in the left knee-joint. Anamnesis: more than 10 years of disease links to the flu, when appeared pain in shallow joints, and then - at large. Repeatedly treated oneself stationary, sanatorium, adopted prednizolon, broufen, sulphurated hydrogen baths. The effect of medical treatment is nondurable. Clinically: motions in the neck region of spine, humeral, elbow and knee joints are limited. In left knee joint the flexor contractures under the corner of 90 degrees, and in right motions from 175 to 60 degrees. Pain is moderate. The left knee-joint of bullous form, the symptom of ballotment of patella is negative. There is expressed atrophy of quadriceps muscle of thigh.

1.Your primary diagnosis of disease.

2.What additional inspections must be conducted?

3.Basis of final diagnosis.

4.plan of medical treatment.

A Patient 50 years entered clinic with complaints about pain in lumbar region, which irradiates to lower extremities, on complication of independent movement, on inconvenience to sit, limited movement in hip joints. Anamnesis: suffers for about 15 years. Pain in the spine and hip joints appeared after overcooling.

Repeatedly treated in hospitals and sanatoriums. after medical treatment the temporary improvement was marked. Clinically: can move by means of crutches, taking away both feet simultaneously (pendulum type of movement). In thoracic region there is kyphosis. Joints of upper extremities, knee and ankle - without deviation from a norm, in hip joints the motions are absent.

1 Ground the diagnosis of disease.

2.read sciagrams of spine and hip joints.

3.plan of medical treatment.

5.A patient 42 years entered clinic with complaints about severe pain in the right knee-joint, increase of it in volume, impossibility of motions in it due to strengthening of pain, high temperature of body (to 39-39,5°). Anamnesis: a week ago contacted with follicular angina. Yesterday, returning from a policlinic, experienced sharp pain in the right knee-joint. In the evening temperature rises up to 40 degrees. Called the brigade of first-aid which hospitalized the patient in medical establishment. Clinically: right knee-joint is megascopic in volume, skin above it is hyperemic, edematic and painful. Flexor contractures, motions in joints are impossible due to severe pain. Positive symptom of ballottement of patella is present.

Indicate, what is necessary to conduct the inspection for clarification of diagnosis.

What do you know about sinovitis and value of sinovial liquid in different diagnostics?

Your clinical diagnosis of disease.

Work out a plan of medical treatment of patient.

6. Patient 32 years, vetfeldsher(vet health worker), entered clinic with complaints about pain in hip joints, sacrums, lumbar and knee-joints. Anamnesis: pain at knee, hip joints appeared suddenly with the simultaneous rise of temperature of body. Before this he is healthy. Clinically: position of patient on bed is forced with the legs flexed in hip and knee-joints the knee-joints are megascopic in a volume, positive symptom of ballottement of patella, In palpation - sharp pain. Atrophy of quadriceps muscles is marked, pain in the projection of femoral and ischiadic nerves, limitation of motions in joints.

1. Your primary diagnosis of disease.

2. What additional inspection to conduct for clarification of diagnosis?

3. With what inflammatory diseases it is necessary to differentiate?

4. Your final diagnosis.

5. Work out a plan of medical treatment.

7. Sick 23 years entered clinic with complaints on strong pain in the right knee-joint, high temperature of body. Anamnesis: three weeks ago contacted with the intestinal disease which was accompanied by frequent bloody diarrhoea,high temperature of body. Treated himself in an infectious hospital. Clinically:

position on bed is passive, lies on the right side, bowing. A knee-joint is megascopic in volume, contours are smoothed out, positive symptom of ballottement of patella. In palpation - sharp pain.

1.Your preliminary dianosis?

2.What additional inspection must be conducted for clarification of diagnosis?

3. Substantiation of final diagnosis of disease.

4. Work out a plan of medical treatment of sick.

8. A girl 14 years old entered clinic with complaints about pain in the small joints of hands and in the left knee-joint. Anamnesis: two weeks ago carried the infectious disease that was accompanied by the high temperature of body, headache, hyperemia of pharynx, and pain in swallowing. For 3 days of illness pain irradiates to neck, thorax and person appeared out. Treated oneself at home. Clinically: skin of person, neck, breasts are dry and pale. Desquamation of skin like scales. Temperature of body about 39 degrees. The small joints of hands and left knee-joint edematic, skin above them are hyperemic, a free liquid is marked, in palpation sharp pain.

The I. Your primary diagnosis of disease.

2. What additional inspection needs to be conducted for clarification of diagnosis?

3. Conduct differential diagnostics.

4.Ground the final diagnosis.

Work out a plan of medical treatment of sick.

9. A patient 30 years entered clinic with complaints about sharp pain in the right knee-joint, edema and high temperature of body to 40 degrees in the evening and drop in morning. Anamnesis: being in the business trip, had communication with an unknown woman. After 3 days sharp pain appeared during urination stained Yellow-grey colour. Treated himself unofficially. In 2 months of medical treatment felt normal. Clinically - the common state of patient is disturbed, temperature of body of 39,8 degrees. A right knee-joint is considerably megascopic in a volume, skin above it is hyperemic, edematic and painful. Movement in joints are impossible due to severe pain. Thigh is in flexed position at an angle of 90 degrees.

1.Your primary diagnosis of disease.

2. What inspection must be conducted for clarification of diagnosis?

3. Ground the final diagnosis of disease.

4. Work out a plan of medical treatment of the given patient.

10. A patient 15 years entered clinic with complaints about pain in a right knee-joint. There is edema, Anamnesis of disease links to contusion. Two weeks ago in physical training class knee joint got injured. Did not paid a special attention to it, soon the pain in the joint disppeared. Afterwards sharp pain

with the simultaneous rise of temperature to 38 degrees appeared. Clinic: a right knee-joint is megascopic in volume, positive symptom of ballot of patella, hypotrophy of quadriceps muscle, positive symptom Alexsandrova. Movement in the joint are limited due to severe pain.

The I. Your primary diagnosis of disease.

2 What additional inspection must be conducted for clarification of diagnosis?

3. what diseases it is needed to conduct differential diagnostics by?

4. Your final diagnosis of disease.

Work out a plan of medical treatment of the given patient.

Block of information.

clinico-roentgenologic, pathomorphological classification of RA after Is. T. Sclyarencom, In. And. Stetsouloyo:

The I stage - sinovitis (acute, subacute, chronic);

The II stage - the productive-destructive panarthritis, which has three phases:

à) exudative-proliferative;

á) proliferative-destructive;

â) destructive-sclerotic.

The III stage - ankylosing (fibrotic, bone).

The I stage: deformation of joint due to sinovitis, pain, especially in movement, positive symptom of ballot of patella, reflex half-bent position of joints with violation of physiology equilibrium of muscles (extensors, adductors ,flexors, abductors - in brief), that, results in additional hypoxia due to the compression of superficial and deep vascular network. The Autoimmunity pathological process in connective tissuetakesplace in the conditions of hypoxia as a result of positive vasculitis – all these very quickly leads to muscular contracture in default of structural changes in a joint. Thus, reflectory forced position in a joint as a result of sinovitis is the starting mechanism of origin of contracture in the staggered joints.

The Synovial sheet is hyperemic, thickened, with megascopic and thickened villi. Depending on activity of inflammation an inflammatory liquid accumulates in the cavity of joint.

The first phase of the II stage: disfiguration and pain diminishes, on skin visible wrinkles, the symptom of ballot is positive, forced position. The Sinovial sheet yet more is thickened, hyperemic, begins to overgrow granulation

tissue (beginning of formation of pannus). In the places of wrinkling of capsule of synovial sheet accretes with a fibrous capsule.

The second phase of the II stage: the volume of joint diminishes considerably, tension of skin disappears almost, the symptom of ballot is absent. It is felt at palpation of bulge of capsule and in a synovial cavity felt doughy tension. Expressed hypotrophy of extensors.

The Sinovial sheet is covered by granulation excrescences which fill the cavity of joint and zavoroti, copulas, meniscuses, are blocked, cartilage of joint surfaces (pannus). Pannus grows into hyaline cartilage and destroys it. At deleting of pannus on a cartilage remain a different size and depth defects, extraarticular, intracapsular joints.

The third phase of the II stage: hypotrophy of muscles progresses. Especially extensors, contractures, adductors and dislocation of joints. A skin is less tensed. At palpation there is the considerable bulge of capsule of joint, in the cavity felt doughy consistency. At opening of joint cavity is filled with granulation tissue, adhesions to the joint surfaces, which fills by the thick layer of granulation tissue, majority of cartilaginous tissue is blasted under, tissue atrophy, tailings of meniscuses which are thickened and dystrophied. A capsule is considerably thickened due to the granular-cicatric regeneration. In place of synovial sheet there is a granular-fibrotic layer in joints.

The III stage - a joint is deformed, a skin above it is atrophic, temperature is not changed. At opening of joint a capsule is accrete by joint ends, between them a crack is filled with massive cicatric tissue (fibrous ankylosis) or bone tissue (bone ankylosis).

Complex medical treatment: - •

And Therapeutic:

1. Determine focus of chronic inflammatory process and its specific medical treatment;

2. General therapeutic measures directed to improve the function of the immunological, CVS, nervous, endocrine systems, respiratory function and function of liver.

3. Non specific antiinflammatory medical treatment;

4. Basic medical treatment

5. Biostimulation of metabolic processes: aloe, vitreous humor, rumalon

6. As an anti-inflammatory, desintoxication,improvement of reactive and microcirculatory beds,to excrete autoimmune complexes, to inhibit autoimmune processes and to decrease permeability of connective tissue membranes, intravenously in drops infuse (according to sclyarenko E.T.): contrykal 10-20 thousand.+heparin - 7-10 thousand units + 400,0
hemodes. At the end of infusion intravenously slowly infuse 10,0 10% solution.
neo(rheopolyglukin), calcium chloride. Gives about 3-5 at the interval of 5-7 days.

7. High activity the course of infusion on Sclyarenco E.T.

(300 - 400 cm3 reopoliglukin or neohemodes, in a small bottle to add 10 - 15 thousand of units of contrykala or trazilola and 7-10 thousand units of heparin. At the end of dropper 10,0-10 % solution of chloride calcium). Such droppers 3-5 with intervals 3-5-7 days, depending on activity of process.

B. Local medical treatment:

1.In forced position of extremities and immobilization of extremities use plaster bandages for the prophylaxis of contractures.

2.Removal of inflammatory liquid with introduction to the cavity of joint by Sclyarenco 0,02 g powder of furazolidon with 0,5-1 cm3 heparin and - 1% lidocaine. Such mixture gives 3-5 with intervals 5-7 days depending on activity of process.

3. The stimulation of muscles.

4.phonoforesis with hydrocortizone, electroforesis of calcium with novocaine.

5. Night Compression is a compress with a 30-50% solution of dimexide. Preliminary to smear the surface of joint in even correlations by heparin, hydrocortizone ointments.

With fading of inflammation in a joint and decreasing of pain - LFC on renewal of amplitude of motions in a joint and force of endurance and capacity of muscles.

At high activity of process in a dropper we add to a 75-125 mg solution of hydrocortizone, and also in solution of furazolidone 50 - 75 mg hydrocortizone for introduction to the cavity of joint. Such a few introduction of hormonal preparations valid for one time will not result in hormonal dependence. It is possible at the height of inflammatory process - brief course of medical treatment by hormonal preparations.

V. Treatment physical education is used from the first day of receipt of patient in permanent establishment.

G.Sanatorium medical treatment. In zero and 1st stage of activeness, in clinical and laboratory remission it is not a contra-indication for resort medical treatment.

From resort factors widely use radons, sulphurated hydrogen shalfeynimi, scipidarnimi baths

D. Ortopedic medical treatment.

In 2nd stages: removal of forced position, immobilization plaster bandages, stimulation of muscles, impulsive exercises for the muscles of immobilized extremity, puncture and removal of inflammatory liquid and introduction of furazolidone.

The first phase of the II stage: removal of contracture, stimulation of muscles of immobilized extremities, puncture and removal of inflammatory liquid from a joint with introduction of furazolidone.

The second phase of the II stage: removal of contracture, stimulation of muscles, introduction of furazolidone.

The third phase of the II stage: removal of possible contracture or by means of apparatus in multiple defects, myostimulation for preparation of muscles before operative medical treatment.

E. Surgical medical treatment.

In default of effect of conservative medical treatment during 10- 12 months the shown surgical medical treatment. Surgical medical treatment relies on the stage and phase of process.

In early stage - synovectomy.

Port the phase of the II stage - synovectomy with partial capsulectomy (in the places of accretion of synovial sheet with a fibrous capsule) and deleting of marginal tissue.

In the second phase of the II stage - sinovocapsulectomy, arthrolysis, osteotomy.

In the third phase of the II stage: sinovcapsoulectomy with arthroplasty.

The III stage - artroplasty, resection osteotomy, endoprothesis.

The E. Social rehabilitation of patients with rheumatoid arthritis - important state problem. It requires the permanent decision both in professional, and in the psychological orientation of sick RA.

Employment 6

«Flacid and spastic paralysis. Clinic. Principles of prophylaxis and medical treatment».

Entry. Paralytic and spastic paralyses are severe disease in children, that results in violation of support and motion, losses of capacity and causes permanent disability. Early diagnostics, timely complex and prophylactic medical treatment allows to decrease the degree of disablement and turn to the active life a plenty of children, that carried the disease.

Before that how to pass to independent work, familiarize with the purpose of practical work.

General purpose:

1. To be able to identify independently clinically how to differentiate paralytic and spastic paralyses.

2. To interpret the most characteristic deformations of upper and lower extremities.

3. Correctly to formulate the clinical diagnosis, to conduct differential diagnostics.

4. To ground a testimony to conservative and operative medical treatment of patients.

5. To capture principles of social and labour rehabilitation.

Program of independent work of students for practical employment

Task 1. For verification of initial level of knowledges from a normal anatomy, traumatology and orthopaedy gives an answer for such control questions:

The I. Peculiarities of anatomic structure of hip, knee and wrist joints.

2. What muscles are flexors, extensors, lift and elevate the thigh? Indicate the places of their attachment?

3. What muscles flex and extend the shin? Indicate the places of their attachment?

4. What muscles of spine, offer flexion and extension of foot?

5. What deformations of foot can develop at the fall or at the decline of force of muscles of flexors, extensors, pronators and supinators of foot, fall or decrease of function of the quadriceps muscle?

Task 2. On the basis of study of basic and additional literature give a written answer for such questions:

Common notions about the clinical features of poliomyelitis, clinical forms, stages, degree of neurological disorders.

2. Clinical features of consequences of poliomyelitis at the defeats of muscles of upper and lower extremities.

3. Clinical features of consequences of poliomyelitis at the defeats of muscles of the back.

4. Principles of prophylaxis and conservative orthopaedic medical treatment of poliomyelitis.

5. Principle of reconstructive- restoration operations at the consequences of poliomyelitis (tendon-muscular plastic operations, operations on bones and joints).

6. Principles of social and labour rehabilitation at the consequences of poliomyelitis.

7. Classification of cerebral spastic paralysis.

8. The Symptomatology of spastic cerebral paralyses.

9. Principles of complex orthopaedic medical treatment of cerebral spastic paralysis.

10. Principles of modern surgical medical treatment of cerebral spastic paralysis: operations on main and spinal brain, peripheral nervous trunks, muscles, tendons,bones and joints.

Program of independent work of students on practical employment

Task 3. Curation.

1. To master the clinical reception of inspection of patients with flaccid and spastic paralyses.

2. To conduct differential diagnostics with similar diseases and ground a clinical diagnosis.

3. Taking into account age, roentgen-anatomic and clinical features of illness to draw up a plan of medical treatment for the patient.

Execution sequence:

1. During collection of anamnesis to pay attention to heredity, character of labour, beginning of disease, his character, first step and features of step, subsequent diagnostic and medical measures.

2. Review: position on bed, motor apparatus, character of lameness. anteriorily: defect of pelvis, visible shortening of extremity, axial deformations, atrophy of soft tissues. From one side: physiology curvatures of spine and pathology of trunk. Behind: deformations of spine, atrophy of gluteal muscles and muscles of the back.

3. Palpation: determinations of turgor of skin, its temperatures.

4. Measuring of relative and anatomic length of lower extremities, functional shortening. Measuring of volume of segments of extremity.

5 Measuring of amplitude of movement in joints.

6.Determination of strength of muscles of upper and lower extremities.

7.Interpretation of sciagrams.

8.Conduction of differential diagnostics and ground of diagnosis.

9.To put plan of conservative and operative medical treatment.

10. Show clinico-roentgenologic data to the teacher and participation in the discussion of theme of practical work.

Task 4. For verification of capturing your material of practical work Solve such tasks:

1 Child 9 years entered clinic with complaints about the difficulty to walk. In three-years of age had contacted with illness, that was characterized by the rise of temperature to 40 degrees, by common indisposition, black-out consciousness. In three days the parents noticed violation of function of lower extremities. Treated oneself in the infectious separation, where conservative medical treatment was conducted. Renewal of function of muscles of lower extremities came, however the active extension of thighs are impossible, a foot is adducted and is found in flexed position from the hip joint.

Give answers for such questions:

What disease is present in the child?

What muscles are suffered in the given child?

What clinical diagnosis did you put?

Work out a plan of medical treatment of patient.

2. A child 5 years does not walk, sits independently, can stand, hold objects in hand. During standing observes bending of thighs, shins, bending of feet to the sole side. Insignificant arbitrary movement of upper extremities. The active movement of type of «difficult small knife», Increased tendon reflexes.

What disease does the child has?

Substantiate the clinical diagnosis.

Work out a plan of medical treatment for patient.

4. Child 10 years suffer by illness Litlya. Have expressed extensor-addductor contracture of thighs, flexor contracture of knee-joints, equinous options of feet.

Account for the reason of origin of illness Litlya.

2. By what it is possible to account for the presence of extensor-addductor contracture knee-joints, equinous options of feet.

Work out a plan of complex surgical medical treatment for the given patient.

Block of information.

As a result of poliomyelitis there are the flaccid paralysis of extremities.

Poliomyelitis carries an epidemic character. Mainly anterior horns of spinal cord are affected. More frequent all are ill by 2 years old. During illness distinguish pre paralytic, paralytic, restoration phase and period of the remaining phenomena. Paralyses arise up in the various departments of extremities and trunk. Paralysis can be only one or both lower extremities, but there can be the defeat simultaneously of upper and lower extremities. In the heavy case the muscles of trunk are affected.

Prophylaxis and medical treatment of deformations.

At all stages the sick are subjected to complex prophylactic medical treatment, that consists of such measures:

1. Organizational: prophylactic inoculations by the special vaccines, which was given to all child's population of our country, correct consideration of patients and immediate hospitalization of them in the infectious department of hospitals.

2. Conservative medical treatment: physical therapy (thermal procedures, electroforesis with novocaine, potassium iodide, faradization of muscles, diathermy, biostimulation of muscles by apparatus «Mioton»).

3. Functional: medical gymnastics, massage.

4. The orthopaedic medical treatment directed on warning of development of contractures and deformations of locomotor system, especially in paralytic and vidnovlyovalnou phases. Correct position of patient on bed, application of plasters and plastic tires, correct and timely raising of patients with the use of special arm-chair, crutches, vehicles).

5. Operative medical treatment:

1. Operations on soft tissues - tendon-muscular plasty, are conducted only at the good and excellent function of muscles.

2. Operations on the bone system-spine, thorax, bones and joints.

Reasons of cerebral paralyses:

1. intrauterine or perinatal (lack of development of cerebrum, acute and chronic infectious diseases, mechanical or psychical trauma, period of pregnancy, frequent abortions, radiation illness).

2. Maternity (intranatal) reasons (traumas of brain during births, mechanical reasons, asphyxia).

3. Post-natal (postnatal) traumas of cerebrum in the first days of life of child, complication of infectious diseases (meningitis, encephalitis), food poisoning, radial defeats and in.

Early diagnostics and medical treatment of cerebral spastic paralyses determines a result and lowers the degree of expression of the second changes from the side of apparatus of support and motion.

Work 7

Theme: «congenital and the acquired diseases of spine».

Entry. In the process of physical development of man its carriage which can be pathological is formed, that is by the forecaster of development of disease of spine or to assist to development of degenerative-dystrophic processes in a spine. At the inspection of children and teenagers the important sugnificance has the exposure of pathological process, its correction. At children and teenagers scoliotic illness which needs complex orthopaedic medical treatment develops often, as not treating patients or severe disability comes at late diagnostics. degenerative-dystrophic diseases of spine, which arises in young and middle age, from statistical data, results in protracted temporal or and permanent disablement. Early complex medical treatment allows to restore work capacity, to warn disability.

Basic literature:

1. Yomashev G. S. Travmatologiya I ortopediya - Medicine, 1983

2.Ñìèðíîâà L. And., Shoumada I. V. Practichescie zanyatiya on travmatologii I ortopedii - C «Zdorovúya», 1984, 352 s.

Additional literature:

1.Áóðüÿíîâ And. A. Groudnoy osteohondroz.- C. : Lenvit, 1997.- 328 s.

2.Êàçüìèí A.I. Dvouhýtapnoe operativnoe lechenie scolioza.- : Meditsina,1968.

3.Þìàøåâ G. S. Osteohondrozi pozvonochnica.- : Medicine, 1984.

4.Ï³äðó÷íèê anatomy of man (section Osteology, sindesmologiya»).

Reynberg S. A. Rentgendiagnostica zabolevaniy costey I soustavov. - : Medicine, 1964, t. II.

Before start to prepare familiarize with the purpose of practical work.

General purpose: *I*ndependently to be able to clinically estimate a carriage, to expose deviation from a norm. To diagnose clinically and roentgenologically: scoliotic illness, osteochondrosis, spondyloarthrosis, deformative spondylosis, spondylolistesis. To appoint complex medical treatment in dependence on age, stages of illness, concomitant diseases, to define a prognosis for cure and work capacity.

Concrete tasks of employment:

The I. To find out reasons of formation of pathological curvatures in a child.

2. To expose the type of carriage of child (teenager).

3. To be able to diagnose the early degrees of scoliotic illness and conduct differential diagnostics with similar illnesses and syndromes.

4. To appoint complex (physical therapy, medicinal, orthopaedic) medical treatment at a pathological carriage and initial degrees of scoliotic illness.

5. To be able to conduct roentgenologic diagnostics of scoliotic illness.

6. To conduct clinico-roentgenologic diagnostics of osteochondrosis deformative spondylosis, spondyloarthrosis.
7. To know the methods of complex medical treatment of osteochondrosis.

8. To conduct differential diagnostics of osteochondrosis, spondylolis.

9. To conduct clinico-roentgenologic diagnostics of spondilolistez and set principle of its medical treatment.

Program of independent work of students for preparation of practical class.

Task 1. At verification of initial level of Your knowledges from a normal anatomy, radio-therapy, traumatology and orthopaedy give written answers for such control questions:

1. What is function of vertebra as an anatomic-functional unit?

2. How many vertebrae are in norm at a man in every region? What physiology curvatures are in norm, when they are formed?

3. What motions are carried out on each area of spine?

4. What is the structure and function of intervertebral disk? (sketch the structure of disk schematically).

5. What function of arcuate process joints and tendon apparatus of spine?

Sketch schematically the sciagraphic image of pectoral and lumbar vertebrae in front and lateral projections.

Task 2. On the basis of study of basic and additional literature from the theme of employment give written answers for such questions:

1. What scoliotic illness and its difference from a scoliotic spine?

2. What principal reasons of development of scoliotic illness?

3. In what age more frequent all fall ill on scoliotic illness and when it makes to progress?

4. What basic clinical signs of scoliotic illness of different degrees (orthopaedic and visceral)?

5. What excellent signs of initial displays of scoliotic illness from:

à) scoliotic spine;

á) illnesses Sheerman-Maou;

â) tuberculous spondilitis?

6. What reason of formation of costal hump at scoliotic illness?

7.Clinico roentgenologic signs of scoliotic illness? Sketch the chart of determination of degree of deformation after methods Cobba, Fergyosona

8. What methods of medical treatment are used at the I- II degree of scoliotic illness? Describe every method.

9. what is the surgical medical treatment of scoliotic illness? Describe every method.

10.What are the advantages and disadvantages of fixation of trunk by corsets?

11.What is the pathologoanatomic essence of osteochondrosis, deformative spondylosis, spondyloarthrosis.
12.The reason of origin of counterfoil displays at osteochondrosis?

13.What main clinical manifestation of osteochondrosis of neck, pectoral, lumbar departments of spine (visceral, vegetative, root)?

14.What clinical and roentgenologic signs of osteochondrosis from spondylosis and spondiloartrosis?

15.What essence of methods of medical treatment, that are used at osteochondrosis:

à) medicinal;

á) physical therapy;

â) orthopaedic;

ã) balneological.

16.What are the methods of prophylaxis which are used for prevention of osteochondrosis at the persons of sitting and physical labor?

17. What is the pathologoanatomic essence of spondilolistez? What reasons of origin of spondilolistez and in what regions of spine?

18. What methods of medical treatment of spondilolistez are used? Expose soug every method.

Program of independent work of students on practical employment.

Employment 3. Microcuration.

And to Capture practical skills of estimation of physiology and pathological carriage, to know the methods of correction of pathological carriage.

2.To know practical skills of clinico-roentgenologic diagnostics of scoliotic illness, osteochondrosis, spondilosis, to conduct differential diagnostics.

3. To capture knowledges of basic modern methods of medical treatment of widespread diseases of spine.

Execution sequence:

And During collection of anamnesis in children pay attention to heredity, features of physical development, preliminary diagnostic medical measures. In adults it is important to expose unfavorable professional and other factors which accompany the disease.

2. Review: in vertical position, in a bare kind. anteriorily: accordance of physical development of child with age, constitutional type, symmetry of length and heights of standing shoulders, deviation of breastbone from a vertical line, forms of thorax presence of pathological changes, length of line of waist on either side, degree of expression of triangles of waist, presence of transversal folds on a trunk, defect of pelvis, relative length of hands. From one side: expressed physiologic curvatures of spine. Behind: location of shoulder-blades (after a height in relation to the line of spinose process), presence of vertebral or costal hump, its form (pointed, dome-shaped, keel like), presence of physiologic curvatures of spine, rejection in the side of spinose process (to define the region of spine). Presence of posttraumatic and postoperative scars.

3. Palpation. Line of spinose process on different areas of spine, presence of protuberances and deepening, deviation from a sagittal plane. Palpation of paravertebral points, exposure of painful areas. Inspection of painful and explorer points on extremities. Determination of vegetative changes and symptoms of defeat of peripheral nerves.

4. Functional inspection: changes of trunk or deformations of trunk in weakened or tense position at pulling of child by head, at inclination of head, on a hard bed.

5. Interpretation of sciagrams.

6. Formulation of diagnosis and conducting of differential diagnosis.

7. Planning of medical treatment: physical therapy, medicinal, orthopaedic, complex of medical gymnastics.

8. Determination of medical, social, labour prognosis.

9. Ground of the clinical given and practical skills before a teacher, participation in the discussion of theme of employment by asking questions.

10. Capture by the methods of differential diagnostics of diseases of spine after roentgenograms, by sliding seats, mastering principle of application of prosthetic wares.

Task 4. For verification of capturing your material of practical employment decide such tasks:

1. At the review of schoolboys it is exposed in a class, that in 5 teenagers 12-13 years there is asymmetry of location of shoulders in relation to the plane of thorax, lateral curvature of trunk. No complaints.

What diseases can be assumed? What diagnostic measures it is needed to do? As well as who conduct the subsequent supervision of children? What methods of prophylaxis and medical treatment need to be applied in each of possible cases of illness?

2. At a child 11 years lower thoracic dysplastic scoliosis is exposed. At the sciagraphy inspection in stand-up position present lateral curvature of spine - angle of deformation by Cobba is 15 degrees. What degree of illness? What method of medical treatment needs to be applied, its purpose? What plan of clinical supervision? In What way should continue teaching of child at school?

3. Physically healthy man 42 years after lifting a sack which weighs 80 kg experienced sharp pain in the region of buttocks, he couldn't extend. In a hospital is delivered on stretchers.

What disease or trauma can be assumed? What clinical and roentgenologic characteristic for each of the assumed diseases or traumas is given? What medical treatment needs to be applied in every possible case?

4. Sick 46 years, who suffers from obesity of the II degree, during the last 2 years treated oneself concerning a lumbar-sacrum radiculitis. After lifting of can with milk of weight about 35kg felt a sharp pain in the sacrum region, muscular weakness in feet, cannot walk.

What diseases can be suspected? What pathognomonic signs characteristic for each of the assumed diseases? What diagnostic inspection must be applied degree of their informing? What medical tactic in every possible case?

Block of information.

Carriage - orthostatic position of man in space at which well-kept all physiologic curvatures of spine, at symmetric position of head, trunk, pelvis, upper and lower extremities.

The Scoliotic spine - curvature of spine in a frontal plane Indicated deformation is actively removed in tense position of patient that is by inclination of trunk to head or in the weakened horizontal position.

The round back - deformation of spine, at which expressed pectoral kyphosis and lumbar lordosis.

The flat back - physiologic curvatures of spine are smoothed out.

The chairlike spine - deformation of spine at which expressed thoracic kyphosis and cervical lordosis.

Scoliosis - disease with curvature of spine in a frontal plane with an obligatory rotatory press and torsion of vertebrae.

On modern presentations osteochondrosis - this degenerative-dystrophic disease of spine with the primary defeat of intervertebral disk, with various structural-functional violations.

In genesis of osteochondrosis of spine forming of «vicious circle» of dystrophic and degenerative changes at a different level of organization of the system of motive segments of spine(RSH)is a determinative: organ, tissue, cellular and molecular.

Decision of treatment- prophylactic tasks it is possible with the use of methodology of systems approach. It foresees consideration of structure and function of spine as systems, that executes supporting, protective and motive functions. The segment of spine, the subsystem of which includes the two contiguous vertebra, intervertebral disk, paired arcuate processes, costal-vertebral and costal-transversal processes, muscular and ligamental apparatus, is the basic element of this system.

Coming from the biomechanics features of spine, a basic bearing subsystem is selected: bodies of vertebrae and intervertebral disk connected by a ligamental apparatus, constantly perceiving and passing all types of loading (And. Hviscg, O. Corg, 1989).

An auxiliary bearing subsystem includes the processus joints related to the handle of vertebra and its functions as the sole unit. In a pectoral department also includes costal-vertebral and costal-transversal joints. Distributing of loading, that exceed physiology norms and limitations of deformation of intervertebral disc is the basic function of subsystem.

By an anchorman the muscles are a factor in providing of influencing of the hieratically built systems of more high level in the feasible functions of spine. The structural elements of this system present the complex of clinico-formation with difficult macromolecular organisation.

Stages of osteochondrosis of spine: ^<

- internal disc displacements of dragnistogo yadertsya

- protrusion of intervertebral disk

- disk srength.

In addition, select next structural-functional violations - spondyloartrosis and stenosis of vertebral channel.

The clinical displays of degenerative-dystrophic defeats of spine are conditioned - discalgia, spondyloartralgia and instability.

Instability of spine - it is the clinical pathological state leading biomechanics substratom of which insufficiency of bearing possibilities is, that under action of the external loading will be realized in surplus deformations, pathological motions and damages of the element systems of spine (And. Hvisyoc, 1984).

Select three forms of instability at the degenerative-dystrophic defeats of spine - discogenic, discarthrogenic and discarthroosteogenic.

The syndrome of discalgia is characterized by the complex of clinical manifestaions, that include considerable pain, neurological displays and rough mimic reactions, that result in the function box of segments of spine. The reason of its forming is the pathological changes of intervertebral disks - intrajoint displacements, swampy yadertsya, protrusion and disk cili. Thus, development of pain syndrome is conditioned the irritation of ending of zvorotnoi branch of sinousvertebral nerve (mechanical and chemical character), located in the back walls of fibrous ring, back longitudinal copula, hard brain-tunic.

The IInd direct squeezing by the elements of disk of sensible branch of nerve roots a root pain syndrome and proper sensible, motive and trophic changes of the proper localization is formed.

The defeat of joints of spine stipulates development of spondyloarthralgia. The last is characterized to typical symptomocomplexes and shown up pain (lumbalgia, dorsalgia) of a different force, with the gradual beginning and arbitrary progress, that increases in transition from the state of rest to motions and diminishes after a limbering-up or massage, is accompanied by limitation of motions - unbending and rotatory movements.

Such state can be accompanied by feeling of crunch and lousciv in a spine. The irritation of ending lies in the basis of spondyloarthralgia, medial branch of spinal nerve.

Degenerative stenosis of vertebral canal is one of forms of degenerative-dystrophic defeat of spine with a characteristic clinical picture, which can be investigated for discogenc defeats, instabilities of segments of spine and spondyloarthrosis.

Firm, constantly increasing pains are the clinical displays of stenosis, syndrome of alternating claudication, according to the level of defeat of sharp violation and reduction of symptoms at the forced position of body.

Pain and other neurogenic changes can be conditioned, by both the compression of elements of channel of spine and development of cicatric process in epidural space, that causes violation of trophicity of elements of spinal cord.

Employment 8.

Theme: «Disease of feet».

Entry. The disease of foot accounts for 4,4 % of all orthopaedic deformations and is the frequent reason of temporal or of long duration disabled and

disability of patients in young and capable of working age. It is the reason of disease of feet both congenital, and the acquired factors, in particular, long excessive static overloads, inflammatory, infectious and degenerative-dystrophic processes in muscles, tendons, bruso-tendon and bone-joint apparatus traumas.

All it requires knowledges of reasons and mechanism of disease or deformation, methods of prophylaxis, medical treatment by not only a doctor by -ortopedic-traumatologist, but also doctors of general type, especially those, who conducts the policlinic-ambulatory reception, that work in medical emergencies, child's establishments. A basic prophylactic orientation must be directed on the early exposure and medical treatment of children, teenagers and young people.

Basic literature.

1. Yomashev G. S. Travmatologiya I ortopediya.- M.: Medicine, 1983.

2. Troubnicov In. F. Travmatologiya I ortopediya.- C.: «Vûsshaya school», 1986.

3.Ñìèðíîâà L. And., Shoumada I. V. Practichescie zanyatiya on travmatologii I ortopedii - C. : «Zdorove», 1984, 352 s.

Additional literature.

1. Textbook of anatomy of man.

2. Textbook of radio-therapy.

Before that how to pass to , familiarize with the purpose of practical employment.

General purpose: to learn the reasons of the acquired and congenital diseases of feet, to capture the methods of differential diagnostics, by the methods of medical treatment and prophylaxis.

Concrete tasks of employment:

1. To know classification of the acquired and congenital diseases of feet.

2. To learn etiopathogenesis congenital and acquired diseases of feet.

3. To capture differential diagnostics of nee and acquired diseases of feet.

4. To be able to ground a testimony to the conservative and operative methods of medical treatment.

5. To be able to interpret sciagrams at the congenital and acquired diseases of feet.

6. To master the basis of prophylaxis, medical and social rehabilitation.

To know the terms of temporary disablement at conservative and operative medical treatment of congenital and acquired diseases of feet.

Program of independent work of students to practical employment.

Task 1. For verification of initial level of Your knowledges, from a normal anatomy, radio-therapy, give written answers for such questions:

1. Anatomic-biomechanic features of feet (structure, ligaments and their functional role)?

2. What muscles take part in formation of vaults and their function?

3. Sketch the normal sciagram of bones of foot.

Task 2. On the basis of study of basic literature from the theme of employment give writing answers for such questions:

1. Describe the types of flat feet.

2.Reason out the deviation of first toe outside and formation of hammerlike toes.

3. Describe the clinical picture of congenital and static flat, differential diagnostics and ground medical treatment.

4. Ground the reasons of origin of cone, cavitous and heellike feet; conduct differential diagnostics, ground tactic of medical treatment (conservative and operative).

5. Indicate a testimony for setting of orthopaedic wares (shoe, apparatus) at the diseases of feet.

Program of independent work of students on practical employment.

Task 3. Microcuration.

By the I. To understand clinical and roentgenological inspections of patient with congenital and acquired illnesses of feet.

2.To make differential diagnostics of congenital and acquired illnesses of feet.

3.To ground the plan of medical treatment (conservative or operative) taking into account age of sick, character of disease.

Sequence of action:

And During collection of anamnesis to pay attention to beginning and development of disease, inherited data, complaints of patient (localization of pain at a rests and in exertion, inconvenience during wearing of shoe and other).

2.Inspection: gait, form of feet, presence of deformation (rolling of front area of feet, thickening of longitudinal vault, external deviation of toes, exostosis, thickening on the sole surface of front area and in.) of feet.

3.Palpation: presence of pain points, local temperature and other.

4. Measuring of length of foot (presence of shortening, angle of deviation of first toe outside).

5. Determination of volume of motions in the joints of fingers of foot, knee joint and their correlation with the normal volume of motions.

6.interpret sciagrams.

7.Make differential diagnostics and substantiate diagnosis.

8.plan of medical treatment.

9. substantiate diagnosis and plan of medical treatment of thematic patient before a teacher that participation in the discussion of theme of employment by questioning.

Task 4. For verification of your knowledge in practical employment solve such tasks:

1.Patient in childhood contacted with the infectious disease. Could not walk for long time. In course of time support of lower extremities recommenced partly. At a review there is expressed hypotrophy of soft tissues of the left thigh and shin, can not carryout the active bending of foot inside. The front area of foot at exertion does not take part, angle between the axis of shin and foot is equal to 60 degrees. A heel seems megascopic due to the swelling of soft tissues and skin. At walking, loading is on the heels only, thickening its surfaces.

1. What disease is having the patient?

How is deformation of foot named?

Than the conditioned deformation?

4. Plan of medical treatment.

2. The patient 40 years complains on pain in feet which especially increase in the evening. At a review: the front areas of feet the flattened, first fingers are declined outside to 45 degrees, the heads of ist metatarsal bone are deviated to sole side, deformed, on the sole surface of feet at the level of heads formed callosities, the II-V toes are hammer like, on the back surface of interdigital joints are callose.

1. Your clinical diagnosis of disease?

2. Close formation of deformation of feet.

3. Plan of medical treatment.

3. The sick 35 years complains on pain in the region of feet, shins, on the rapid fatigue of feet, impossibility of carrying of ordinary shoe. The review: the longitudinal sizes of feet are shortened, vaults deep, front departments of feet are flattened, resulted. The heads of plosnevich cistoc are declined in a sole side, the I-IV fingers in position under dislocation to the rear, arcuated in interdigital joints under the angle of 90 degrees, sole surfaces is severely callos.
Describe deformation of feet, and the origin of it.

Ground the plan of medical treatment.

Block of information.

1. Early exposure of deformation of feet in child's age, prophylaxis of progress of them and medical treatment - above all terms of warning of disability and saving of work capacity of patients.

2. Operative interference at transversal flat feet without the deviation And 1st metatarsal bone till mid is non effective conducting of such operations is a tactical error.

3. After all surgical interferences concerning deformations of feet the rehabilitation of patients without orthopaedic wares (insoles, shoe and in.) is a flagrant tactical error also. Only the individual picking of orthopaedic wares in a rehabilitation period up is the mortgage of prophylaxis of deformation.

During the clinical supervision of all patients with deformations of feet and after operative medical treatment, -doctor must always remember about the professional orientation of patients.

Employment 9

Theme:« Modern principles of amputations and methodical aspects of prosthesis».

Entry. Prosthesis is one of types of renewal of capacity and self-service of patients and invalids. Knowledge of bases of Prosthesis by a doctor from speciality «medical business» has the practical value for the medical and social rehabilitation of patients with absence of extremities or their segments, damages and diseases of spine and extremities.

The modern methods of Prosthesis allow so far the patients and invalids with absence of extremities, to get back the consequences of damages and diseases of supporting apparatus and motion to the professional activity or acquire a new speciality, and in default of two extremities - give possibility of self-service or restoration of partial capacity. Prosthesis is one of inalienable elements of rehabilitation.

Basic literature.

1.Þìàøåâ G. S. Travmatologiya I ortopediya.- : Medicine, 1983.

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Additional literature:

3.Ï³äðó÷íèêè from the anatomy of man and radio-therapy.

2.Ñïðàâî÷íèê on protezirovaniyo.-L.: there is Medicine, 1978.

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Before that how to familiarize with the purpose of practical employment.

General purpose: to know a testimony to amputations, methods of their implementation, methods of Prosthesis, illnesses of bones and their prophylaxis.

Concrete tasks:

To Know:

1. Methods of amputations, exarticulation. Testimony to them.

2. Methods of preparation of bones for Prosthesis in policlinics and hospitals.

3. Features of implementation of amputations on different segments: the most rational level, methods of treatment of bone, vessels and nerves.

4. Types of prosthetic appliances and terms of Prosthesis.

5. Failing and diseases of amputated stump.

6.Determine the different types of orthopaedic wares at congenital and acquired illnesses, traumas of supporting apparatus and motion.

To Be Able:

1. To define anatomic length of bones of extremity, its form the presence of clinical signs of illnesses of bones.

2. To define the volume of motions in joints, that are located in close proximity of bones.

3. Clinically and roentgenologic to estimate the functional state of bone.

4. To pick up the optimum variant of prosthetic good.

5. To define a testimony to setting of orthopaedic apparatus (orteziv) at the diseases of extremities and spine.

To define the type of orthopaedic good for correction of congenital and acquired illnesses of feet.

Program of independent work of students preparation to practical employment.

Jamming 1. For verification of initial level of knowledges you must give a written answer for such control questions:

I. What is amputation?

2. What is exarticulation?

3. What types of amputations exist after facilities and terms of their implementation?

4. What absolute and relative indiactions to amputation?

5. Which are facilities of treatment of bone opilou, their advantages and failing?

6. What complications and diseases of bone obpilou , vessels and nerves, their reason?

7. What diseases of skin and scar in the region of bones are possible in default of correct treatment and prophylactic measures and wrong Prosthesis?

8. Why does atrophy of muscles of bones of extremity come?

9. Why develop contractures of joints, that located near-by bone.

10. What purpose and tasks are pursued at imposition of orthopaedic apparatus on extremities in restoration and restoration periods of poliomyelitis?

11. For what are intended by a patient by spastic paresis or paralyses, with slow consolidation of breaks and unreal joints of extremities orthopaedic apparatus?

12. What corsets are used at the damage of spine and when?

13.Ç what purpose the corsets at the degenerative-dystrophic diseases of spine are used by?

14.What corsets are used at scoliosis?

15.What orthopaedic apparatus (ortezi) are used at congenital anomalies of development of extremities and what purpose of this?

16. Which are congenital and the acquired deformations of foot are subject to correction by orthopaedic adaptations (by elections)?

Task 2. Check up the knowledges by solving such situation tasks:

A Child 5 years, who suffered in car accident, executed amputation of left shoulder in the lower third. Prosthesis was not conducted. In 2 years, at the clinical inspection, it is exposed: bones of shoulder has a conical shape, the sickly butt end of bone end palpate under a skin.

Define the reasons of development of vicious coucsi and pain syndrome.

2. Working is 47 years. At unloading of reinforced concrete beams a load weighing 400 kg fell down on a right leg. In 2 hours after a trauma the conducted amputation of leg at the level of overhead third of shin. The Zagivlennya wounds happened by the primary pull, but through the presence of pain syndrome of coucsi by an imobilizatsiya back gipseous tire proceeded during 6 weeks in position of bending of knee-joint under the corner of 150 degrees.

Indicate tactic of subsequent medical treatment of sick. What facilities it is possible to remove a bend by contractourou knee-joint?

3. To working (37 years), that suffered in a railway catastrophe, amputation of the left thigh was executed in the lower third with closing of bone by an obpilou periosteum. A wound began to live to primary natyaginnyam.

What measures must be carried out for preparation of coucsi to prosthetic appliance? A how many time it is possible in prosthetic appliance for him and what kind to prosthetic appliance you will recommend?

At a tractor driver (27 years) during the field works, the opened break of bone of shin happened as a result of trauma, a gas gangrene developed in the middle third. Conservative medical treatment turned out uneffective. Recommended the Consilioum doctors to carry out amputation.

Indicate a level and mean of amputation and ground him.

5. After amputation about one year passed in lower third of right forearm.

Indicate, what facilities it is possible to help a patient by, that to turn him a capacity.

Program of independent work of students on practical employment. Task 3. MIcrocouratsiya.

1. To capture the features of inspection of patients with ampoutatsiynimi coucsami of extremities, and also different methods of preparation of coucsi to protezouvannya.

2. To be able to diagnose failing and diseases of coucs, and also their medical treatment.

3. To master a testimony and contra-indication to protezouvannya.

To be able to estimate efficiency of prosthetic virobim.

Sequence of action:

1. Collecting anamnesis, to pay attention to anamnesis data of trauma, method of medical treatment and protezouvannya.

2. During the review of patient to define the motor vehicle of sick (with a stick, crutches, on prosthetic appliance and in.).

3. At palpatsii of coucsi to define her opornist, pain, degree of mobility of scar, presence of bones vistoupim.

4. To carry out measuring of length of coucsi, volume of motions in a procsimalnomou joint.

5.Âèâ÷èòè sciagrams of coucsi and to be able them to interpret.

6. To ground a diagnosis, medical treatment and motodi protezouvannya.

7. To be able to report data about a patient and his disease to the teacher.

8. Discussion of theme at a clinical conference to the I educational room.

Block of information.

I. prosthetic appliance has a goal to recover the absent segments of extremities and compensate violation of function of aparata support and motion. Basic setting of prosthetic appliances for lower ciitsinoc - this renewal of ñòàòèêî-dynamic function, and for prosthetic appliances of overhead extremities of renewal to the delight and maintenance of the article of labour and way of life. The common requirements to prosthetic appliances of overhead and lower extremities are: cosmetichnist, rationality of weight, comfort, lightness, reliability and durability.

II. New in amputation and prosthetic appliance.

Amputation of extremity is considered as a difficult, responsible surgical operation, about the necessity of which it follows to make decision no less than by three doctors (eh sansilio). Thus it is necessary to ground a testimony to amputation, to define its level and method, method. From quality of primary amputation efficiency of restoration medical treatment,result of prosthetic appliance and social-labour rehabilitation depends largely.

At determination of testimony to implementation of amputation it is necessary to take into account the common state of health and character of defeat of extremity of patient, which place taken among: :

1) heavy traumas with a limbering-up, tearing of extremity off, by the syndrome of squeezing; 2) the obliterouyochi diseases of vessels, complicated by necrosis or gangrene of fabrics of extremities (endarterioz, atherosclerosis, diabetes); 3) malignant tumours; 4) nee anomalies or defect of development of extremities which it is impossible to liquidate by other methods.

For prevention of the most widespread errors which result in complications and increase of terms of rehabilitation expediently to execute the following:

1. At primary surgical treatment at patients with the heavy trauma of extremity it is necessary maximally to save its length, especially when it is up to saving of knee to the joint. In such cases forming of ampoutatsiynoi coucsi is carried out in two stages: and) primary surgical treatment with deleting of the obviously damaged fabrics;) forming of coucsi taking into account the full value of fabrics. In default of threat of infection bone the plastic arts can be applied.

2. It follows to execute amputation mainly by a loscoutnim method. Thus it is important to prevent natyagou of skinning loscoutiv and try that a pislyaoperatsiyniy scar was located on the zadno-pidoshveiiy surface of coucsi. Though at the valuable forming of coucsi and absence celoidozou place of placing of scar it is not; substantial value.

3. With the purpose of prevention of ligature norits it follows to carry out gemostaz by a catgut, with the obligatory sewing of main vessels.

4. At treatment of bone opilou it is necessary carefully to smooth aperiostalno out his edge by napilcom, to save marrow (not to dip out!!!), at possibility to recover by an opil periosteum or fastsieyo. Above opilom it is needed to fix muscles-antagonists, to prevent considerable natyagou of muscles, and also formation of their surplus array and pockets. It is necessary to take off comb near the end of opilou velicogomilcovoi bone.

5. Carefully to process nerves, not injuring, to cross them on possibility procsimalne after introduction 1,0-2,0 ml 1,0 % solution of novocaine and bandaging by a catgut.

6. With the purpose of prevention of haematoma necessarily to sew a pislyaoperatsiynou wound up with drainage, better with vacuuming.

7. To impose a gipseous bandage after the operation in physiology position of the truncated extremity.

8. In early terms, beginning with a 2-3th day after the operation, to apply the complex of physical methods, massage, LFC, phantom (isometric) gymnastics and to use medical-training (primary) protezouvannya.

9. After a zagivlennya wound and preparation of coucsi (reduction of edema, rise of functionality) in the term of to 2-3 months, to send patients with protezouvannya, mainly by translation in permanent establishment of prosthetic enterprise of the proper region following existent position.

10. At implementation of amputation higher it follows to remember knees, sh optimum level of coucsi of thigh for protezouvannya - middle third and border of the middle and lower his third. At forming of coucsi of thigh it is necessary to avoid nadmiri soft fabrics, to try at sewing together of muscles-antagonists to provide their functions and definite natyag.

11. The rise of functionality of coucsi of thigh is achieved by implementation of cistcovoplastichnoi operation with the use for aoutoplastici mainly nadcolinca in different modifications (on Gritti-Shimanscomou, Oppelyo, Climovou). In the cases when during primary amputation (after a heavy trauma) of condition do not allow to execute bone the plastic arts, it follows to store nadcolinoc for poslidouyochoi cistcovoplastichnoi reampoutatsii.

12. At determination of level of amputation after a heavy trauma or at the disease of vessels it is necessary carefully to explore the state of viability of fabrics with the purpose of the maximal use of all possibilities for saving of knee-joint. At providing of valuable function of knee-joint amputation of shin even at the level of overhead fourth considerably diminishes heavy of disability.

In connection with the àíàòîìî-functional features of shin the developed different modifications of cistcovoplastichnih operations by means which the increase of supporting surface is achieved, stabilizations of cistoc shins, the best terms for poslidouyochoi muscular the plastic arts are created. The middle third or border of the middle and lower third is the optimum level of forming of valuable coucsi of shin for effective protezouvannya. At the level of the lower third expediently to execute amputation only during primary amputation after a heavy trauma, taking into account the necessity of reampoutatsii and the use of bone the plastic arts.

Most functionality that considerable endurance of coucsi of shin is achieved by connection of both cistoc of aouto- or allotransplantatom.

Expediently to unite existent methods and modifications of cistcovoplastichnih operations in 4 groups, accordingly the following classification:

1. Ceiling by the opiliv cistcovo-ocistyanim transplant of one or two cistoc shins.

2. Connection and ceiling of opiliv cistoc shins of aouto- or allotransplantatom.

3. Connection of cistoc shins of cistcovo-ocistyanim aoutotrans-plantatom and alotransplantatom.

4. Connection of cistoc shins free aoutotransplantatom and alotransplantatom.

The method of these cistcovoplastichnih operations is laid out in methodical recommendations of Kiev NDITO.

SEQUENCE OF PERIODS OF FORMING OF AMPOUTATSIYNIH COUCS

A timeliness and efficiency of rehabilitation of patients with the ampoutatsiynimi defects of extremities relies on a sequence and povnotsinnnosti measures of three basic directions - restoration medical treatment, protezouvannya and social-labour readaptatsii, which in a complex make the sole system of medico-sotsialnoi rehabilitation, that unites five periods (And. Crest, 1995).

During the first period dooperatsiyna preparation is carried out, ob-rountovouyotsya testimony for implementation of amputation, decisions about its level and method of operation are made. After amputation of extremity it is necessary to conduct the complex of measures on prevention of complications. Next to medicinal therapy in 2-3 days according to the phases of forming of coucsi it follows to use fizmetodi of medical treatment, LFC, massage, the accordant presented chart:

Fizmetodi of medical treatment Terms of beginning and course of medical treatment after the operation Medical physical education

The electric field, OUVCh on a 2-3 day (8-10 procedures) Medical physical education on the program And period. Respiratory exercises, common strengthening.

.Oultrafioletove irradiation on a 6-8 day (8-12 procedures) The special exercises for well-kept extremity, statistical exercises for the muscles of coucsi.

Electroforez nonocainou on a 12-15 day (10-15 procedures) Medical physical education on the program of the II period. Hygienical gymnastics.

The Diadinamichni currents Bernara on a 15-20 day (6-8 procedures) Massage of well-kept extremity and coucsi.

Sgroum SVCh on a 20-28 day (5-7 procedures) Exercises on strengthening of muscles of coucsi and well-kept extremity.

Paraffin apli- catsii on a 25-30 day (10-15 procedures) Exercises on force and co-ordination of motions.

After the successive use of complex of fizmetodiv, LFC and massage at swingeing majority of patients already in 3-4 weeks coucsa is prepared to primary-training protezouvannya.

In the second period the efforts are directed on the active forming of vitrivaloi coucsi with the wide use of fizmetodiv of medical treatment accordingly with a testimony. A leading place herein to the period occupies electromiostimoulyatsiya well-kept muscles of coucsi, that is instrumental in their strengthening, improvement of circulation of blood and warning of contractour.

In the second period of patient teach to implementation of phantom gymnastics, partial resistance on the end of coucsi. In this period it follows to spare the special attention psihoadaptatsii, to determination of possibilities of professional readaptatsii. Middle term of the first and second period of to two months during which a patient is found in the travmatologichnomou or surgical separation of hospital, where preparation to protezouvannya is carried out, forming of valuable coucsi. Preparation to permanent protezouvannya is completed in the third period of rehabilitation, when forming of relatively stable coucsi is closed and made medical-training prosthetic appliance. Thus most expediently, that medical-training prosthetic appliance on the construction approached permanent to prosthetic appliance.

In the process of mastering of training to prosthetic appliance it follows to pay attention to making of correct co-ordination of motions at walking, on fixing of a new stereotype of functioning of well-kept muscles and joints. It is important during the step to use sense to the phantom of the lost extremity and provide contact of end of coucsi in prosthetic appliance.

At rational medical-training protezouvanni in 1,5-3 months primary permanent protezouvannya and patient is carried out on prosthetic appliance can be written out home to final stabilization of sizes of coucsi. The question of domestic and social rehabilitation decides in this period, and for the persons of age capable of working - professional orientation and employment.

During a fourth period (from 3 to the months) relative stabilization of volume of coucsi is achieved and made. Functional possibilities of invalids, their capacity, depend from the full value of permanent protezouvannya.

It is necessary to provide not only mastering of correct skills of circulation, but also to give complete information about the care of coucsoyo and prosthetic appliance.

In the finishing, fifth period of rehabilitation, the definite stereotype of circulation on prosthetic appliance is fastened, adaptation in the way of life is completed, possibilities of labour processes broaden. The important value has providing of the adjusted terms of labour and way of life taking into account compensate possibilities of invalids. All measures of this period must be

directed on warning of the defeats related to absence of extremity, on the timely making healthy, providing of valuable protezouvannya.

For determination of the grounded diagnosis in relation to the state of coucsi expediently to use the following classification with the display of clinical signs:

,1. Trophic ulcer. 2. Giperceratoz.2. Dermatitis, eczema. 3. Malignant regeneration of trophic ulcer.

II. Pain syndrome.

1. Local pain of coucsi, giperesteziya, neuritis. 2. Sickly nevromi. 3. Phantom pains, caouzalgii.

III. Inflammatory processes.

1. Phlebitis. 2. Piodermiya. 3. Infiltrat. 4. Abscess. 5. 'Fourouncouloz. 6. Phlegmon. 7. Ligature noritsya. 8. Osteomielit.

IV. Anatomic defects.

1. Scars are soldered with inferior fabrics, celoidni complications 2. Nadmira soft fabrics, boulavovidna. 3. Sharply conical shape 4. Salient end of cistoc shins. 5. Very short coucsa 6. Superfluously long. 7. Lateralne rejection of malogomilcovoi bone. 8. Osteofiti. 9. Valgousna position of coucsi. 10. Contractour, bend in coulshovomou or knee-joint. 11. Limitation of motions in joints, anciloz. 12. Instability in the knee-joint of recourvatsiya.

I. Trofichni violation.

Unhealing wound. 2. Matseratsiya, ecscoriatsiya, bedsores.

Thus it is necessary to take into account that at the defects of coucs or at the diseases a few failing, among which it follows to select an anchorwomen and others, which take place at a definite patient, can take place. For example: staggered ampoutatsiyna coucsa of the left shin at the level of the seredioi third, unhealing wound, local pain on the end of coucsi, bend contractoura in a knee-joint.

3. The state of oporno-rouhovogo aparata - well-kept extremity, large joints and spine (conclusion of orthopaedist, surgeon, roentgenologist).

4. Quality of protezouvannya - construction to prosthetic appliance, features of receiving shell, rozpridilennya loading on coucsou, the use of partial support on its eventual surface.

On the basis of the state of coucsi and functional indexes prosthetic appliance is determined full value of protezouvannya, if necessary direction on making is given to prosthetic appliance of other construction.

5. The state of social-labour readaptatsii - possibility of returning to the previous profession or pereprofilyovannya, mastering of new, labour in ordinary terms or adjusted, nadomna labour, terms of residence, material well-being by motor vehicles and other.

On the basis of data of complex inspection in a policlinic the plan of subsequent rehabilitation taking into account recommendations of medico-sotsialnoi expert commission is developed. For the ground of this plan it is suggested to follow the state of adaptatsiyno-pristosovnih changes and äåãåíåðàòèâíî-dystrophic defeats of coucsi, joints and spine, meaning three degrees of compensation: compensations of the lost functions, violation (decline) of compensation and its derangement.

Depending on the degree of compensation three basic complexes of rehabilitation measures are offered:

I.Compensation of the lost function.

1. Annual prophylactic review.

2. Making healthy twice on a year (ambulatory, in sanatorno-courortnih terms).

3. The managed mode of labour (prevention of overloads).

4. Rational protezouvannya.

5. The adjusted terms of way of life and pratsilz' -i

II. Violation of compensation.

1. Clinical review 2-3 times per a year.

2. Making healthy - 2-4 times (ambulatory, in permanent establishment, in sanatorno-courortnih terms).

3. Reduction of the mode of loading.

4. Correction of protezouvannya, to go around with a stick (on crutches).

5. Transition on easy labour.

III. Derangement of compensation.

1. Clinical review 4-5 times per a year.

2. Stationary medical treatment with the complex course of dedistrofichnoi and protibolovoi therapy, by the poslidouyochim sanatorno-courortnim making healthy.

3. Exception of manual labour, unloading of joints, to walk on crutches, feasible work in domestic terms.

It is very important to teach a patient to execute phantom exercises which fasten muscles, diminish pain the atrophy of soft fabrics. It follows to spare considerable attention to conducting of massage of extremity on the side of amputation in the conditions of out-patient's clinic, permanent establishment, sanatorium. Expediently to conduct a massage and most sick every day. For prevention of matseratsii and cracks it follows to suggest to use the proper creams, ointments, glycerin.

Providing of partial resistance on its pidoshvenou surface (contact)is the important condition of warning of trophic violations of coucsi, that is achieved by the use of supporting pillows and other materials (voyloc, paralon, seed of

flax, millet and other). The managed mode of circulation on prosthetic appliance, systematic making healthy, the adjusted terms of labour, in the way of life are instrumental to prevention of violations and derangement of compensation, saving of health and capacity of invalids.

Employment 10

Theme: «Ambulatory reception».

Entry.Àìáóëàòîðíî-ïîë³êë³í³÷íà service - mass type of medicare. Exactly in a policlinic initially apply patsienti and more than 96 % in-patients are completed by medical treatments in a policlinic. In ambulatory-policlinic terms a prophylaxis and clinical work with the population is conducted.

The rise of role and value of àìáóëàòîðè-policlinic help to the population can be in the conditions of high organization, qualification of doctors and auxiliary personnel, as it is necessary in good time to provide the early exposure and medical treatment of orthopedic-traumatological patients at the modern level of medical science, to conduct the health centre system, prophylaxis of orthopaedic diseases and traumatism. Therefore the special value in preparation of future doctors is given by practical employment the «Ambulatory reception», on which students must capture the features of labour of doctor of orthopaedist in ambulatory-prophylactic terms.

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2. Textbook of radio-therapy.

3. Volcov In., Dedova In. D. Detscaya ortopediya.-M.: Medicine, 1972.

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General purpose: to capture skills of independent work of doctor of orthopaedist in ambulatory-policlinic terms.

Concrete task:

1. To know the contingent of orthopedic-traumatological patients, that are subject to amboulatorno-policlinic medical treatment and health centre system.

2. To know the volume of medical help to the orthopedic-traumatological patients in ambulatory-policlinic terms.

3. To know the equipment of consulting rooms of orthopaedician in ambulatory-policlinic terms.

4. To be able to conduct an ambulatory-policlinic document and accounting.

5. To capture the features of diagnostics and medical treatment of orthopedic-traumatological patients in ambulatory-policlinic terms.

6. To capture the features of diagnostics and medical treatment of orthopaedic patients in amboulagorno-policlinich terms.

7. Familiarize with the questions of temporal and permanent disabled of orthopedic-traumatological patients.

Task 1. After the study of basic literature from the theme of employment give a writing answer for such questions:

1. Role and tasks of ambulatory-policlinic medical treatment of orthopaedic-traumatological patients.

2. Features and difference between the primary reception of orthopedic-traumatological patients in out-patient's clinics and policlinics and repeated.

3. Role and tasks of emergency health care on industrial enterprises.

4. What trauma, traumatism?

and. Classification of traumatism.

. How is frequency and heavy of traumatism determined?

in. Terms of temporal disabled with payment of sheet of disabled at traumas.

4. Tasks and functions LCC, LSEC, their structure.

5. Ground testimonies or grounds for translation of the victims on disability and criteria of determination of group of disability.

Program of work at independed work to practical employment.

Task 2. For verification of initial level of Your knowledges it is necessary to remember from the course of organization of health protection a section the «Ambulatory-policlinic help to the population» and give a writing answer (in a working notebook) for such control questions:

1. What tasks and purpose of ambulatory-clinical help to the orthopedic-traumatological patients ?

2. Requirements to the orthopedic-traumatological cabinets and policlinics.

3. Testimony to ambulatory-policlinic medical treatment of orthopedic-traumatological patients and volume of the specialized help.

4. What document must be conducted by a doctor on the ambulatory-policlinic reception of orthopedic-traumatological patients?

5. What contingent of orthopedic-traumatological patients is subject to clinical consideration? Purpose and tasks of the health centre system.

6. What type of medical help must give orthopaedician - by a orthopedic-traumatological patients at a home?

Program of independent work on practical employment.

Удалено:

Task 3. Microcouratsiya.

1. Familiarize with organization, equipment and document of consulting room of orthopaedist in out-patient's clinic and policlinic.

2. To master the independent reception and medical treatment of patients with displazieyo and nee dislocation of thigh, nee pigeon-toe crivoshieyo, by the diseases of spine, joints.

3. To capture the independent reception in the policlinic (out-patient's clinics) of travmatologichnih patients with zaboyami, gemartrozami, roztyagom and breaks of copulas, by the fresh breaks of phalanxes of fingers of brush and siopi, radial bone in a typical place, by the breaks of surgical neck of humeral listci, elbow sprout with the diseases of coucs and other written out with statsionara on. ambulatory medical treatment.

4. To learn to design a document on LCC and LSEC.

Execution sequence :

To collect anamnesis, to conduct a review, palpatsiyo, to define rejection of axis of extremities, their length, amplitude of motions in joints; to learn sciagrams, analyses, to conduct differential diagnostics, to set a diagnosis, ground and conduct medical treatment, to fill an ambulatory card and other necessary documents.

Task 4. Check up the knowledges by raising of situation tasks.

1. On the reception the child of 3 months was brought with a nee pigeon-toe. 10 days ago a doctor imposed her gipseous bandages («knee-boots»). Account for tactic and method of medical treatment of new-born with a nee pigeon-toe in àìëóáàòîðíî-policlinic terms.

2. A mother brought on the reception a 2-lunar child (boy) with complaints, that he constantly lies with an inclined in one side head. Showing out her in middle position is not succeeded. Objectively: a child is unsickly, on a skin the pathological changes are not exposed. A head is inclined to the right, a person is returned in an opposite side. At palpatsii of neck to the right in the middle of groudinoclyochichnososcovogo muscle the fusiform dense bulge is determined. Showing out a head in middle position is not succeeded through sharp tension of

groudinoclyochichiososcovogo muscle to the right. What disease it is necessary to conduct differential diagnostics with? Ground medical treatment.

3. Parents appealed with complaints, that their 4-years-old daughter is not mobile, walks rocking. It is known from anamnesis, that births were timely. A girlie developed well, began to walk at in 1,5, but fell often. Objectively: development of child answers age, the feed is satisfactory, walks perevalyoyochis from a side on a side (duck step). On a skin the pathological changes are not exposed. The contours of large vertlyogiv come forward in the region of coulshovih joints of palpatorno, apexes of them on 0,5 sm higher than line Rozer-Nelatona. In coulshovih joints there is insignificant limitation of taking and rotary motions of thighs. Symptom Trendelenbourga positive from both sides. Atrophy of muscles, violation of sensitiveness is not exposed.

Conduct diferentsiyiou diagnostics, ground a clinical diagnosis. What inspection must be conducted for a final diagnosis? Medical tactic.

4. In a cabinet the delivered victim of 54 years. Hour backwards fell down on a right hand. Complaints about pain in a promenevo-zap'yastcovomou joint, it is impossible actively to carry out motions of brush through sharp pain. Objectively: skin covers are not damaged. In the region of lower third of right forearm and promenevo-zap'yastcovogo joint slight swelling, deformation on the type of «bayonet». At palpatsii and axial loading on a forearm present sharp pain in the region of distalnogo epimetafizou radial bone. Active motions of brush impossible through pain, and passive - are sharply limited. Ground a clinical diagnosis. With what trauma of region of promenevo-zap'yastcovogo joint it is necessary to differentiate? Value of roentgenologic inspection? Your tactic and method of medical treatment.

5. A patient in a gipseous bandage (type the «knee-boot»)came on the reception, 8 a week the dvocistochcoviy break of the left shin happened ago. Ground tactic of subsequent medical treatment. Indicate the term of disabled at such break.

6. Patient 23 years, turner on speciality, appeared on the reception with complaints about pain in a right knee-joint, impossibility to carry out motions. How a similar state is found out from anamnesis for a year was earlier. Two previous times passed, when patient to attain unbending of extremities was not able, carried out passive motions. This bout independently to remove the blockade of knee-joint him was not succeeded. Objectively: a right leg is arcuated in a knee-joint under the corner of 140 degrees. Skin covers are not changed, the contours of knee-joint are normal. Neither passively, nor actively to carry out motions in a knee-joint is not succeeded, pain at palpatsii in the area of knee-joint. What disease of joint can be suspected? Conduct differential diagnostics and set a clinical diagnosis. What additional inspection needs to be conducted? Your final diagnosis, tactic of medical treatment.

Block of information.

At present o'clock a large role is got to development and perfection of ambulatory-policlinic help to the population. In out-patient's clinics and policlinics patients get the complete volume of modern skilled and specialized medical treatment, daily permanent establishments with valuable medical treatment get organized, patients, that were written from permanent establishments, complete the course of medical treatment and rehabilitation. It allows to conduct not only prophylactic medical treatment, but also to warn

development of illness, to conduct the clinical supervision after patients to the removal of danger of development and progress of illness. Can exemplify to put with violation of carriage. The exposure of such children in child's preschool establishments and conducting of complex of prophylactic measures allows to pick up thread a normal carriage, to warn development of pathological got up scoliotichnoi illnesses.

Employment 11

Theme: Break in two collar-bones, shoulder-blades, proximalc part of humeral bone».

Entry. Among all damages of skeleton break in two collar-bones make from 3 to 16 %, humeral bone - from 3 to 12 %, shoulder-blades from 0,9 to 1,6%. Timely diagnostics and application of rational conservative and operative methods of medical treatment result in complete renewal of function of overhead extremity and capacity of the victim. Late diagnostics, wrong grant of the first medical aid, applications of inefficient methods of imobilizatsii multiply the terms of medical treatment, conduce to the origin of complications - slow mozoleoutvorennya, unreal joints, contractour humeral joint, that to a great extent violates the function of overhead extremity, sharply lowers the capacity of patients and causes disability.

Basic literature.

I. Yomashev G. S. Travmatologiya I ortopediya.-M.: Medicine, 1983

2.Òðóáíèêîâ In. F. Travmatologiya I ortopediya.- C-: «Vûsshaya school», 1986.

3.Ñìèðíîâà L. And., Shoumada I. V. Practichescie zanyatiya on travmatologii I ortopedii.- C.: «Zdorovya», 1984, 352 s.

Additional literature.

The I. Pidrouchnic anatomy of man.

2. Textbook of radio-therapy.

3. Roucovodstvo on ortopedii I travmatologii.-M.: Medicine, 1968, t. III.

Before that how to pass to samopidgotovci, familiarize with the purpose of practical employment.

General purpose: to be able independently clinically and roentgenologic to diagnose break of collar-bone, shoulder-blade, procsimalnogo department of humeral bone, to conduct transporting imobilizatsiyo, repozitsiyo of wreckages, to carry out medical imobilizatsiyo, to work out a plan of a next functional and physical therapy medical treatment.

Concrete tasks of employment:

1. To learn the mechanism of breaks of collar-bone, shoulder-blade, procsimalnogo end of shoulder; typical displacements of wreckages at the damages.

2. To learn the clinical signs of breaks of collar-bone, shoulder-blade, procsimalnogo end of humeral bone.

3. To interpret sciagrams at the indicated damages.

4. To conduct differential diagnostics of damages of region of humeral joint.

5. To execute transporting imobilizatsiyo overhead extremity. To carry out odnomomentnou repozitsiyo at the break of collar-bone with displacement of wreckages, and breaks of surgical neck of humeral bone

6. To impose medical imobilizouyochi bandages.

7. To work out a plan of functional and physical therapy medical treatment of patients.

8. To define a testimony to the surgical methods of medical treatment of damages.

Program of independent work of students at samopidgotovtsi to practical employment.

Task 1. For verification of initial level of knowledges from a normal anatomy, radio-therapy, travmatologii and orthopaedy give an answer for such questions:

Anatomic structure of collar-bone, shoulder-blade and humeral joint. Name the muscles of humeral belt, places of their attachment and function.

Task 2. On the basis of study of basic literature from the theme of employment give writing answers for such questions:

1. Describe the clinical signs of breaks of collar-bone without displacement and with displacement of bone wreckages. Conduct differential diagnostics with zaboyami, by the damages of copulas.

2. Character of displacement of bone wreckages at the breaks of collar-bone.

3. Types of bandages, that are used for transporting imobilizatsii at the damages of humeral joint.

4. Testimonies to conservative medical treatment of breaks of collar-bone, their principles.

5. What testimonies to the operative methods of medical treatment at the breaks of collar-bone and their principles?

6. Terms of imobilizatsii extremity, terms of disabled.

7. Classification of breaks of shoulder-blade.

8. What clinical signs of breaks of shoulder-blade?

9. Principles of medical treatment of breaks of shoulder-blade.

10. Classification of breaks of procsimalnogo epimetafiza humeral bone.

11. Types of breaks of surgical neck of humeral bone and feature of their repozitsii.

12. Describe the method of medical treatment of breaks of virostciv of humeral bone without displacement and with displacement of wreckages.

13. Clinic and principles of medical treatment of ïåðåëîìî-dislocations of procsimalnogo end of humeral bone.

14. Conduct diferentsiyiou diagnostics of breaks, dislocations and ïåðåëîìî-dislocations of procsimalnogo end of humeral bone.

15. Which are testimonies and principles of surgical medical treatment of breaks of procsimalnogo end of humeral bone?

10, the Social and labour rehabilitation at the damages of procsimalnogo end of humeral bone.

Program of independent work of students on practical employment.

Task 3. Couratsiya.

1. To capture the receptions of clinical inspection of patients with break of collar-bone, shoulder-blade and procsimalnogo end of humeral bone. To be able to interpret sciagrams.

2. To conduct differential diagnostics of damages of region of humeral joint.

3. Taking into account a clinical diagnosis work out a plan of medical treatment of patients (more conservative or operatively).

4. Principles of rehabilitation of patients with the breaks in the region of humeral joint and reason of disabled.

Execution sequence :

1. During collection of anamnesis pay attention to the mechanism of damage, complaint of patient, position of overhead extremity, poperidni medical measures.

2. Review of position of sick, overhead extremity, presence of deformation, its character, slight swelling and crivoviliv, contours of humeral joint.

3. Palpatsiya: presence of pain in place of damage, crepitatsiya wreckages.

4. Possibilities of active and passive motions in a humeral joint, their amplitude, localization of pain and determination of axis.

5. Interpretation of sciagrams.

6. Differential diagnostics and diagnosis..

7. Plan of medical treatment.

8. Ground of diagnosis, plan of medical treatment with a teacher.

9. Discussion of theme of employment by vzaemoopitouvannya.

Task 4. For verification of capturing you material of practical employment decide such tasks:

1. A patient in 21 fell down from a bicycle on the taken right hand. Grumbles about pain in the region of nadplichchya. At a review: by the left hand supports to the right, right nadplichchya is dropped. A head is inclined to the right. In the region of nadplichchya there is deformation, hemorrhage. Passive motions and humeral joint possible, but sickly, active motions are sharply limited from pain. Ground a clinical diagnosis and work out a plan of medical treatment of sick.

2. A patient is 25 years. Has the break of collar-bone in the middle third. Conducted odnomomentna repozitsiya of wreckages, imobilizatsiya by means wadding-gauze rings of delbe. In 2 days the patient vidzna chiv deformation in the region of nadplichchya, strengthening of pain. Name the reason of the indicated complication, diagnose and work out a plan of subsequent medical treatment.

3. Sick 62 years poscovznouvshis, fell down on the resulted left hand. Experienced sharp pain in a humeral joint and impossibility of active motions. At a review: the contours of humeral joint are smoothed out, holds a hand pinned against a thorax, deformed overhead third of shoulder, hemorrhage on the medialniy surface of shoulder, bocovii surfaces of thorax. Active motions in a joint are impossible, the passive strengthen pain. The axial loading on a shoulder also strengthens pain in a humeral joint. Palpatsiya: local pain below than large virostca of humeral bone.

Ground a clinical diagnosis. Describe the roentgenologic features of this damage and work out a plan of conservative medical treatment of sick.

4. The sick 28 years is delivered in a hospital with complaints on pain in a right humeral joint. Athletic tiloboudovi. At a review is exposed defigouratsiya humeral joint after a type «epaulet» with sharp appearance of acromialnogo sprout of shoulder-blade. Supports a hand by a zdorosoyo hand in position of taking. The axis of shoulder crosses lateralnou third of collar-bone. Motions (active and passive) in a humeral joint are absent, present symptom of «springy mobile».

What additional methods of inspection need to be carried out for clarification of diagnosis? Ground a clinical diagnosis and define the method of medical treatment.

Block of information.

Medical treatment of breaks of collar-bone more frequent all is conducted in ambulatory terms. Most often use imobilizatsiynimi bandages: bandage Dezo, tire Couzminscogo, bandage Smirnova-Vanshteyna.

Testimony for operative medical treatment: the breaks with the damage or with the threat of damage of nervous trunks, vessels, pleura are complicated; break of collar-bone with the vertical location of intermediate to the fragment with the threat of damage of skin; the breaks are opened; interpozitsiya soft fabrics; the second displacement of wreckages.

Classification of breaks of surgical neck of humeral bone: are knocked together, abdouctsiyni and addouctsiyni breaks. One of reasons of unsatisfactory results of conservative medical treatment of breaks of surgical neck of shoulder is ignorance of features confronted wreckages at the ab- and addouctsiynih breaks.

At the abdouctsiynih breaks a distalniy fragment is taken and a corner between wreckages is opened outside. At confronted, except for tractsii on length, it follows to lead a distalniy fragment to the middle line of trunk and erect on 45-50 degrees and in such position carry out imobilizatsiyo.

At the addouctsiynomou break a distalniy fragment is resulted, well and between wreckages is opened to the middle. Therefore at comparison of wreckages except for tractsii on length, it is necessary to take a distalniy fragment from the middle line of trunk and heave up ahead to the corner 45-50 degrees and in such position carry out imobilizatsiyo extremities on all period of consolidation of break. Dislocations of shoulder are divided on: fresh - from the moment of trauma and to 3 days, not fresh - from 3 to 20 days, out-of-date - more than 3 weeks.

At acsilyarnih, traumatic dislocations megod Dganelidze is the most rational method of his removal, at poddzobopodibnih - method Cohera.

Out-of-date dislocations and ïåðåëîìî-dislocations are subject to surgical medical treatment.

Employment 12

Theme: «Damage of diafizou humeral bone and region of elbow joint».

Entry. Among the traumas of aparata support and motion the breaks of diafizou humeral bone and damages of region of elbow joint make from 9 to 12 % all breaks of cistoc.

The loss of function of overhead extremity results in disability and, mainly, at the people of age most capable of working. From here importance of timely skilled help the such victim. The breaks of diafizou humeral bone and elbow joint quite often unite with the damage of peripheral nerves (radial, elbow, rarer than middle). These damages are led to complications, deceleration of growth, forming of unreal joints, tougorouhomosti elbow, humeral joints, paraarticoulyarnih osificativ with violation of function of joints. All it requires not only early diagnostics, anatomic renewal of diafizou humeral bone and joint extremities of elbow joint, but also warning of possible complications and renewal of fouctsii extremity in optimum biological terms.

Basic literature.

And Yomashev G. S. Travmatologiya I ortopediya - M.: Medicine, 1983

2 Troubnicov In. F. Travmatologiya I ortopediya.- C.: «Vûsshaya school», 1986 3 Smirnova L. And., Shoumada I. V. Practichescie zanyatiya on travmatologii I ortopedii - C «Zdorove», 1984, 352 s.

Additional literature.

And Textbook of anatomy of man.

2. Textbook of radio-therapy

3. Roucovodstvo on ortopedii I travmatologii.- M.: Meditsina.1968,t3

Before that how to pass to independed familiarize with the purpose of practical employment.

General theme: to be able independently clinical roentgenologic to diagnose breaks of diafizou humeral bone, cistoc of region of elbow joint, to conduct transporting imobilizatsiyo, repozitsiyo of wreckages, to carry out imobilizatsiyo, to work out a plan of subsequent functional and physical therapy medical treatment.

Concrete tasks of employment:

1. To learn the mechanism of breaks of diafizou humeral bone, distalnoi its area and region of elbow joint, to know typical displacements of wreckages.

2. To master the clinical signs of breaks of diafizou humeral bone and region of elbow joint.

3. To capture interpretation of sciagrams of the indicated damages.

4. To be able to conduct differential diagnostics and ground a diagnosis.

5. To capture the technique of conducting of transporting imobilizatsii at the indicated damages.

6. To capture the method of odnomomentnoi repozitsii of wreckages at the breaks of diafizou humeral bone with displacement, breaks nadvirostcovih and breaks of region of elbow joint.

7. To master the method of medical imobilizatsii breaks of diafizou humeral bone and region of elbow joint.

8. To ground the plan of functional and physical therapy medical treatment after consolidation of break.

9. To be able to ground a testimony to the surgical method of medical treatment.

Program of independent work of students at independed to practical employment.

Task 1. For verification of initial level of knowledges from a normal anatomy, radio-therapy, give an answer for such control questions:

1. Anatomic structure of overhead, middle and lower third of shoulder and region of elbow joint.

2. Describe the normal sciagram of elbow joint.

3. Surgical accesses on shoulders and in the region of elbow joint.

Task 2. On the basis of study of basic literature from the theme of employment give writing answers for such questions:

1. Describe the clinical signs of breaks of diafizou and breaks nadvirostcovih of humeral bone without displacement and with displacement of wreckages. Conduct differential diagnostics with zaboyami of soft fabrics. What character of displacement of bone wreckages at the given breaks, classification of breaks nadvirostcovih.

2.Âèäè bandages, that are used for transporting imobilizatsii-pri damages of diafizou humeral bone and I distalnogo department.

3.Ïðèíöèïè and testimony o conservative medical treatment of these breaks.

4 What testimonies to the operative method of medical treatment at the breaks of diafizou and breaks nadvirostcovih of humeral bone, their principles?

5. Terms of imobilizatsii extremity, terms of disabled.

6. Possible complications at these breaks.

7. What clinical signs of breaks: block of golovchatogo rise, elbow and coronal sprouts, heads of radial bone?

8. Conduct differential diagnostics of breaks, dislocations and ïåðåëîì-dislocations in the region of elbow joint.

9. Principle of medical treatment of breaks of region of elbow joint.

10. What testimonies and principles of surgical medical treatment of breaks of region of elbow joint?

11. Terms of imobilizatsii extremity, terms of disabled at different damages (breaks) of region of elbow joint. Principles of rehabilitation.

Program of independent work of students on practical employment.

Task 3. Couratsiya.

AND

1. To capture the receptions of clinical inspection of patients with the breaks of diafizou and distalnogo department of humeral cisici, regions of elbow joint. To conduct the analysis of sciagrams.

2. To master differential diagnostics of damages of region of elbow joint and breaks of diafizou humeral bone.

3. To learn ob-rountovouvati plan of medical treatment of patients.

4. To know the method of medical and labour rehabilitation.

Execution sequence :

1. During collection of anamnesis to pay attention to the mechanism of damage, complaint of patient, feature of preliminary medical measures, position of brush and fingers.

2. Review: position of sick, in particular overhead extremity, presence of deformation, its character, slight swelling, hemorrhage, contours of humeral and elbow joints.

3. Palpatsiya: determination of local pain, pathological mobile, crepitatsii wreckages (intentionally not to cause).

4. To define possibility of active and passive motions of the damaged extremity, function of brush.

5. Measuring of length of overhead extremity and determination of its axis.

6. Interpretation of sciagrams.

7. Differential diagnostics and diagnosis.

8. Drafting and ground of plan of medical treatment.

9. Analysis of diagnosis and plan of medical treatment with a teacher.

Discussion of theme of employment by vzaemoopitouvannya;

Task 4. For verification of seizing material of practical employment decide such tasks:

1. In a clinic a boy acted 8 years. The diagnosed rozginalniy break nadvirostcoviy of right humeral bone. Under local anaesthesia repozitsiyo of wreckages was conducted, imobilizatsiya by means ëîíãåòíî-circular gipseous bandage to overhead third of right shoulder. In 3 hours the fingers of right brush turned white, vanishing sensitiveness and active motions.

Your diagnosis of complication, that arose up, his mechanism? Methods of prophylaxis and tactician of medical treatment.

2. In a clinic the sick acted 35 years with the break of elbow sprout with insignificant displacement of wreckages. Be ill the imposed back gipseous tire under the corner of bending in an elbow joint to 80 degrees. Sick directed on ambulatory medical treatment. Recommendations: not to take a gipseous bandage off weeks, whereupon to appear on the reception in a policlinic.

1. Whether correct tactic of medical treatment and method of imobilizatsii?

2. Or correct recommendations?

3. Your tactic of medical treatment.

3. 4 a week ago a patient appealed in travmpounct concerning back dislocation of right forearm. Dislocation was removed, the imposed back gipseous tire. Sciagraphy was not conducted. In a policlinic in 3 weeks a gipseous bandage is taken off the appointed medical gymnastics. However, in spite of energetic rehabilitation, motions in an elbow joint did not recommence.

1. What the error of doctor, that gave help and doctor of policlinic is in?

2. What damages it is necessary to differentiate back dislocations of forearm with ?

4. In travmpounct a child 5 years after falling from shoots on a right hand was delivered. The diagnosed break of medialnogo nadvirostca with displacement of wreckages. The imposed back gipseous tire in position of unbending of forearm, whereupon a child is sent to ambulatory medical treatment.

Whether correct tactic of grant of help and subsequent medical treatment? If no, to what?

5. Patient 32 years during a week treated by means skeletal self-control concerning the slanting break of diafizou humeral bone in the distalniy third. However, removing displacement of wreckages on a width was not succeeded. On a 10 day was conducted opened repozitsiyo of wreckages with subsequent by an osteosintezom metallic plate. The next day after the operation it is exposed at a review, that a patient can not actively unbend fingers and brush, and also to take a 1 finger.

1. Whether the operation was legitimate?

2. Why can not a patient actively unbend fingers, brush and to take finger?

3. Tactic of subsequent medical treatment.

6. A patient 28 years fell down on the left taken hand, experienced pain and regions of elbow joint which increased at motions. At a review: the contours of the left elbow joint are smoothed out, motions are limited, a patient fixs by the healthy hand of forearm in middle position between soupinatsieyo and pronatsieyo. Soupinatsiya, pronatsiya impossible through pain, which is localized in the region of projection of head of radial bone. On sciagrams in two projections the break of head of the left radial bone.'

1. Ground the plan of medical treatment.

2. Methods and terms of imobilizatsii.

Block of information.

1. At the exposure of symptoms of damage of radial nerve at the victims with the breaks of diafizou humeral bone the closed methods of repozitsii are contra-indicated. It is necessary to conduct temporal imobilizatsiyo and gosiiializouvati for operative medical treatment.

2. At repozitsii of nad- cherezvirostcovih breaks complete comparison is achieved on condition of removal of rotary displacement of distalnogo to the fragment.

3. At medical treatment of the victims with the breaks of diafizou humeral bone it is needed to remember about possibility of diastazou between wreckages, that arises up under action of weight of distalnogo department of overhead extremity, therefore during imobilizatsii it must remove this negative force.

4. Necessary permanent control after a gipseous bandage at medical treatment of patients with the breaks of nad-cherezvirostciv, regions of elbow joint, as growth of edemata results in the clench of main vessels and development of ischemia and ischemic contractour.

With and n I tt I 13

Theme: «Breaks of bone of forearm».

Entry. Breaks of bone of forearm - frequent damage both at children, and in adults. From statistical data together with epiphysis they make to 41,1 % all damages of skeleton and greater half (53,5 %) of all breaks of bone of overhead extremity.

Complication of anatomic features and functional queries to overhead extremity require their renewal from the first days of stay in medical establishment, that is the mortgage of prophylaxis of disability. The reason of unsatisfactory consequences is the wrong chosen tactic and method of medical treatment, that stipulates physical postion of wreckages, unproviding of firm their connection on all period of consolidation, that in the turn results in deceleration of accretion, forming of unreal joint, groundless long immobilization with development of contractour and violation of function of overhead extremity.

All foregoing needs the skilled help to the patients with the breaks of bone of forearm on the most early stages of medical treatment.

Basic literature.

1 Yomashev G. S. Traumatologiya I ortopediya.- M.: Medicine, 1983.

2 Troubnicov In. F. Travmatologiya I ortopediya.- C.: «Vûsshaya school», 1986.

3. Smirnova L. And., Shoumada I. V. Practichescne zanyatiya on travmatologii I ortopedni.- C : «Zdorove», 1984, 352 s.

Additional literature.

1. Textbook of anatomy of man.

2. Textbook of radio-therapy.

3. Roucovodstvo on ortopedii and travmatologii.- M.: Medicine, 1968, t. III.

Before that how to pass to samopidgotovci, it is necessary to familiarize with the purpose of practical employment.

General purpose: To capture the method of clinical and roentgenologic diagnostics, by medical treatment of damages and breaks of bone of forearm.

AND

Concrete tasks of employment:

1. To be able to diagnose clinically and roentgenologic the break of one cubit, one radial bone, break of both bone of forearm, damage Montedga and Galiatsi, break of radial bone in a typical place.

2. To be able to anaesthetize, to conduct hand repozitsiyo of wreckages at the break of radial bone in a typical place. To capture the bases of imobilizatsii at the given damages.

3. To capture diagnostics contractouri Folcmana, neurodistrofic syndrome Tournera-Zoudeca. To know the method of their prophylaxis and medical treatment.

4. To know a testimony to operative medical treatment of breaks of bone of forearm, terms of imobilizatsii and loss of capacity at all types of damage of forearm.

Program of independent work of students at independent work to practical employment.

Task 1. Check up knowledge from a normal anatomy, radio-therapy and topographical anatomy of forearm. Give a writing answer for such control questions:

By the I. which bone elements are formed elbow and wrist joints?

2. What vessels and nerves supply blood circulation and innervation of forearm, their topography is carried by out?

3. What muscles, bending and unbending of forearm and brush is carried by out, rotary press of forearm? Indicate the places of attachment of adopted by you muscles.

1. How to measure length of forearm, his volume, force of muscles?

2. How to measure amplitude of motions in an elbow,wrist joints?

Task 2. On the basis of study of basic literature from the theme of employment give writing answers for such questions:

1. What working classification of breaks,fracture-dislocations of bone of forearm and mechanism of their origin?

2 Features of method of closed repozitsii of wreckages and subsequent imobilizatsii at the breaks of both bone of forearm in the overhead, middle, lower third, at the flexion and extension break of radial bone in a typical place.

3. Terms of imobilizatsii, consolidations and losses of capacity at the break of one, two bone of forearm, fracture-dislocations and break of radial bone in a classic place.

4. Close origin, clinic, roentgenologic signs and measures of prophylaxis of ischemic contractoure Folcmana and neurodistrofic syndrome Tournera-Zoudeca.

5. Testimonies and methods of operative medical treatment of breaks and fracture-dislocations of bone of forearm.

6. Transfer the reasons of complications, that arise up in the process of conservative and operative medical treatment of breaks and fracture-dislocations of bone of forearm, methods of their prophylaxis.

Program of independent work of students on practical employment.

Task 3. Microcouratsiya.

1. To capture the receptions of clinico-rentgenologichiogo inspection and diagnostics of patients with the damages of forearm and their complications.

2. To be able to conduct clinical and roentgenologic differential diagnostics of damage of forearm.

3. To capture the method of local anaesthesia, closed hand reposition of wreckages at the breaks of ray in a typical place, to know a testimony to different methods of medical treatment of breaks and fracture-dislocations of bone of forearm, to be able to conduct transporting imobilisation.

Execution sequence :

1. During collection of anamnesis to pay attention to the mechanism of trauma (beginning of disease), character and features of ambulatory and medical help.

2. Review of position of sick, visible deformations of forearm an elbow and wrist joint, the state of soft fabrics of forearm, hand (color, swollen, atrophy, trophic violations).

3. Palpation: temperature of skin, resiliency of soft fabrics, localization the pains, pathological mobile, presence of crepition (causing is not specially needed),soft tissue compression, bone appearances.

4. Determination of axial rejections of forearm, measuring of absolute length of forearm, volume, amplitudes of active and passive motions in an elbow and wrist joints.

5. Interpretation of sciagrams: plane of fracture and character of displacement of wreckages.

6. Differential diagnostics and ground of diagnosis, choice of method of medical treatment (anaesthetizing, closed reposition, operative medical treatment, imobilisation, measures of prophylaxis of ischemia). Ground of testimonies to operative medical treatment.

7. Ground of the set diagnosis, method of medical treatment before a teacher and discussion of theme of employment by divided experince in a group.

Task 4. For verification of capturing you material from a theme decide such situation tasks:

1. In a clinic a patient is delivered with complaints on pain in middle third of right forearm, in an elbow joint. It is known from anamnesis, that by a falling beam the blow is inflicted on the back surface of forearm. It is exposed at a review, that skin surface are not damaged, present slight swelling of soft fabrics in middle third of forearm. Deformation of axis of forearm with the corner, opened to the rear, contours of elbow joint, a triangle Gyotera and line of Marcsa is not broken. The pathological mobile of cubit at the level of the middle and overhead third is determined. Active motions in an elbow joint are limited through pain. On a sciagram: slanting break of cubit on verge of the middle and overhead third with displacement of wreckages on length and under the corner opened in a backside, dislocation of head of radial bone in palm's side.

Ground the method of medical treatment of the given damage, terms of imobilisation and disabled.

2. In travmpounct the sick appealed with complaints on pain in lower third of the left forearm, that appeared after falling on palm's surface of brush. It is exposed at the review of forearm and brush, that integrity of skin canopies is not broken, but there is the edema of soft fabrics in lower third of forearm and brush, deformation of longitudinal axis of forearm in the lower third with displacement of brush in a radial and back side. At palpatsii of lower third of forearm on the back surface of him the displaced distal fragment is marked, the distal end of cubit comes forward under a skin. Motions in a wrist joint are limited and sickly.

Ground a diagnosis, method of closed reposition of wreckages, terms of disabled.

3. A doctor is caused on consultation in the surgical separation to the patient, that is hospitalized with suspicion on the phlegmon of right forearm. Three days ago the closed trauma of forearm happened. It is exposed at a review: the edema of all forearm and brush is poured out, a skin is pale, the fingers of hand are arcuated in interphalanxial joints, active motions are impossible. On a cyst and fingers in the lower third the decline of pain sensitiveness is marked. Pulse on radial ;³ðþð³¿ it is not determined. At the roentgenologic inspection the bone damages are not exposed.

Ground a diagnosis, mechanism of origin of disease, method of prophylaxis and medical treatment.

4. The sick 50 years grumbles about permanent pains in a right cyst, to lower third of forearm. It is known from anamnesis, that 5 a week ago the break of radial bone in a typical place happened at her. At comparison of wreckages a plaster bandage was imposed by a term on 5 weeks. It is exposed at a review: edema of soft fabrics of fingers and hand, colouring of skin bluish, the folds of skin are smoothed out, fingers are arcuated in inerphalanxial joints under the corner of 160 degrees. Active motions of fingers are considerably limited, sickly. Violation of sensitiveness is not marked. On a sciagram: spot of osteoporoz of bone of wrist,carpel and lower third of forearm.

Diagnose, account for the reasons of origin of complications, draw up a plan of medical treatment.

5. The student of a 5 class concerning the traumatic extension epiphysiolyses distal end of radial bone came to traumpounct.

Indicate the method of anaesthetizing, sequence of closed repositsion, method and terms of imobilisatsion.

6. In a clinic a patient is delivered with complaints on pain in overhead third of forearm. How appear from anamnesis, a load on a forearm fell down at work. It is set at a review: skin covers the not damaged, soft fabrics in middle and overhead third of forearm . The contours of elbow joint are smoothed out. By Palpation: a triangle Gyotera and line of Marcsa is not broken, pathological mobile of cubit in the overhead third. Active and passive motions in an elbow joint are limited through pain. On a sciagram there is the transversal break of cubit in the overhead third with displacement of wreckages on length, to the width and under the corner opened in palm's side, dislocation of head of radial bone in palm's side.

Ground the diagnosis of damage, method of medical treatment, kind and terms of imobilisatsion, possible complications.

Block of information.

At the breaks of radial bone in a typical place with considerable displacement of wreckages (35 %) in one case palm's branch of ulnar nerve in metacarpel-elbow introaponeurotic space can be subject to squeezing, in other - back branch of migcistcovogo nerve. At similar complications there is a neurotrofic syndrome Tournera-Zoudeca.

The clinical picture of syndrome is characterized by the tight edema of fingers and brush with considerable limitation of their function, pain, by violation of tactic sensitiveness. In clinical motion distinguish two forms of neurodistrofic syndrome -bluish and pale. Roentgenologic picture typical – spot osteoporoz of metacarpel bone and proximal half of carpel bone. Motion of neurodistrofic syndrome it is enough protracted, in the expressed classic forms about 6 months and anymore.

Medical treatment of neurodistrofic syndrome is complex, which a medical gymnastics, physical therapy medical treatment, enters in the complement of (electroforez chlorous calcium, 3 % solution of trimicainou, diathermy, ultrasound, submarine procedures). To the patients with vegetative pathology of overhead extremities the massage of neck department of spine, upper arm is recommended, humeral belt for the improvement of arterial circulation of blood in the distal departments of hand and nomalisatsion trofic.

Medicinal medical treatment: at the expressed phenomena of capillary spasm vascular-extending facilities (bametansoulfat on 1 t. With in a day)are recommended, dialated vessel (soudoucsen, relanioum and in.). Vitamins V1, V2, V12 are widely used. Last in large doses does pain keller action. Preparations of antiinflamation action (boutadion, boutapirin), so called nerotic therapy, are used (novocaine, sovcain, that block normal conductivity, regulator function of nerves and nervous ending).

Employment 14

Theme: «Damage and disease of hands».

Entry. The quantity of patients with traumas and diseases of hands in policlinics makes from 2 to 30%. This category of patients has the large social value, as disability after the traumas of brush arrives at 25-28% among all traumas of the disorders and injuries of the musculoskeletal system. Among industrial traumas 41% makes the defeat of brush and fingers. On the opened damages is 54,6%. Therefore preventives on production have social meaningfulness on business the decline of traumatism on production and saving of capacity.

Basic literature.

1. Yomashev G. S. Travmatologiya I ortopeliya.-M.: Medicine, 1983.

2. Troubnicov In. F. Travmatologiya I ortopeliya.- C.: «Vûsshaya school», 1986.

3. Smirnova L. And., Shoumada I. V. Practichescie zanyatiya on travmatologii I ortopedii.- C.: «Zdorove, 1984, 352 s.

Additional literature.

1. Textbook of anatomy of man.

2. Textbook of radio-therapy.

3. Roucovodstvo on ortopedii I travmatologii.- M.: Medicine, 1968, t. III.

4. Boychev. I dr. The Hirourgiya cyst and paltsev.- Sofiya, 1971.

Before that how to pass to independent familiarize with the purpose of practical employment.

General purpose: to capture independent clinical and roentgenologic diagnostics of the victims with the opened and closed damages of brush, by the diseases of brush, to learn to differential diagnostics, to be able to ground medical treatment, to conduct examination and forecast the results of medical treatment in dependence on the terms of labour and profession of the victim.

Concrete tasks of employment:

1. To capture the clinical and roentgenologic methods of diagnostics of breaks of wrist, carpel and phalanxes of fingers.

2. To capture the conservative methods of medical treatment and know a testimony to operative medical treatment of bone of wrist, carpel and phalanxes of fingers.

3. To learn to diagnose closed and the opened damages of tendons of superficial and deep zginachiv of fingers, and also hypodermic tearing of tendon of rozginacha off. To know tactic of medical treatment at the damage of tendons.

4. To know governed and to be able to conduct primary and ïåðâèíèî-deferred surgical treatment of the opened trauma of brush.

5. To capture diagnostics of such degenerativno-distrofichnih diseases of brush, as crepitouyochiy paratenonit, contractoura Dyopyoitrena, aseptic necrosis of pivmisyatsevoi and chovnopodibnoi cistoc.

Program of independent work of students at samopidgotovtsi to practical employment.

Zavdannya1. For verification of initial level of knowledges from a normal anatomy, give radio-therapy writing answers for such control questions:

1. By what cistcami well-educated wrist, p'yastoc and fingers of brush?

2. What places the superficial and deep tendons of zginachiv of fingers and what violations of functions of fingers register in are here determined?

3. What topography of passing of radial, elbow arteries, middle radial and elbow nerves in lower third of forearm, brush?

Task 2. On the basis of study of basic literature from the theme of employment give in written form the answers for such questions:

1. What clinic, roentgenologic data at the break of cistoc of wrist, p'yastca and phalanxes of fingers?

2. What principles of conservative medical treatment and testimony to operative medical treatment at the breaks, ïåðåëîìîâ-dislocations of cistoc of wrist, p'yastca and phalanxes of fingers?

3. What features of mechanism, clinic, ðåíòãåíî-diagnostics, medical treatment of damages Benneta?

4. What principles and rules of primary and primary-deferred surgical treatment of the opened trauma of brush?

o. What rules and methods of renewal of integrity of damages are a tendon?

6. Viznachit basic facilities of closing of defects of skin on a cyst.

7. What complex medical treatment contractouri Dyopyoitrena is conducted in the I-II stage and in the III-IV stages?

8. What principles of medical treatment of illness Cinbeca, crepitouyochogo paratenonitou?

9. What complications take place, measures of their prophylaxis at medical treatment of breaks of chovnopodibnoi bone and opened trauma of brush?

10. What terms of imobilizatsii and disabled at the breaks of cistoc of wrist, p'yastca, phalanxes of fingers at the persons of manual and mental labour?

11. Which you know types of delights of brush?

Program of independent work of students on practical employment.

Task 3. Microcouratsiya.

1. To capture the clinical and roentgenologic receptions of inspection of patients with the closed trauma of brush, by the damages the tendon, by the diseases of brush.

2. To conduct differential diagnostics of roztyagnennya copulas, breaks and ïåðåëîìî-dislocations of brush?

3. To capture the methods of the local anaesthetizing, by the receptions of closed repozitsii of wreckages at the breaks and fracture-dislocations with next gipseous imobilizatsieyo.

Execution sequence :

1. During collection of anamnesis to pay attention to the mechanism of trauma, localization of damage, violation of function of fingers of hand (brush), character.

2. Review: position of brush, fingers, presence of deformations. The state of soft fabrics of brush: color of skin, was swollen, trophic violations, sensitiveness, at presence of wound the character of her (rizana, lacerated, for a slaughter).

3. Palpatsiya: temperature, sensitiveness, presence of compressions, softening influences, flyoctouatsii, pathological mobile.

4. Amplitude of motions in metacarpal-phalanx and inerphalanx joints (active, passive). Saving or absence of basic types of delights of hand(brush).

5. Study and interpretation of sciagrams (breaks, dislocations, illnesses).

6. Formulation of diagnosis.

7. Medical treatment and ground of methods of medical treatment (closed repozitsiya of wreckages, surgical treatment of the opened trauma with renewal of integrity tendon, imposition of gipseous imobilizatsii); principles of rehabilitation (LFC, massage, fizmetodi).

8. Ground of diagnosis and method of medical treatment before a teacher, discussion of theme of employment by vzaemoopitouvannya in an educational room.

Task 4. For verification of knowledges from the trained theme we recommend to decide such tasks:

1. Youth 16 years, at the play in basket-ball, at falling on a brush injured a finger. At a review: slight swelling of soft fabrics at a region And p'yastcovoi bone, deformation of p'yastcovo-falangovogo joint, pain, that increases at the axial loading on the first finger.

Put a clinical diagnosis. What additional inspection must be conducted for confirmation of diagnosis? Ground the method of medical treatment.

2. In travmpounct appealed persons 35 years with complaints about pain in a right promenevo-zap'yastcovomou joint, that arose up during falling on a brush. At the review of back surface of promenevo-zap'yastcovogo joint noticeable slight swelling of soft fabrics, zgladgenist anatomic tabacerci, limitation of active motions, pain at palpatsii distalnishe of radial bone.

Put a clinical diagnosis. Choose and ground the method of medical treatment, make a prognosis.

3. In travmpounct the sick appealed 25 years concerning the opened damage in the region of procsimalnoi phalanx of the II finger. It is exposed at a review, that there is a sword-cut by length 2 sm, direction of wound - to poperechn-longitudinal osi of phalanx. Indicate the sequence of inspection, put a clinical diagnosis and define the possible variants of operative medical treatment on soft fabrics, on tendons, methods and terms of imobilizatsii.

4. By the blow of hammer a patient injured the distalnou phalanx of the III finger. At a review: bulge, edema of distalnoi phalanx, sinyoshnist of nail plate, sharp pain at palpatsii. Diagnose and transfer medical-diagnostic measures.

5. In a clinic acted persons 55 years with complaints about impossibility to unbend the IV-V fingers of right brush. Illness developed gradually. Three years are ill. Objectively: in p'yastcovo-falangovih and procsimalnih migfalangovih joints noticeable bend contractoura phalanxes under the corner of 90 degrees, in the basis of fingers and distalniy fold of palm in more thick skins dense tyagi of soft fabrics, that stipulate bending of the IV-V fingers. In a basis the III and IV fingers of brush are separate dense knots of soft fabrics.

Diagnose, transfer the complex of medical measures.

6. In travmpounct the sick appealed 30 years with complaints about impossibility of the complete active unbending of distalnoi phalanx of the II finger, that arose up three days ago after falling on a finger in position of bending of phalanx. At a review there is the noticeable insignificant slight swelling of soft fabrics of procsimaliishe nail plate. The active unbending of phalanx is impossible, passive - complete.

Diagnose and define the method of medical treatment.

Block of information.

And.Classification of diseases and damages of brush.

1. Inflammatory diseases of brush, their complications and consequences.

2. Äåãåíåðàòèâî-dystrophic diseases, their complications and consequences.

3. Tumours and tumular educations.

4. Nee deformations.

5. Traumatic damages and consequences.

à) The closed damages: zabiy, hypodermic breaks the tendon, dislocations, breaks.

á) The opened damages:

- the uncomplicated wounds of fingers, brushes;

- the complicated wounds with the defect of skin, by the damage the tendon, nerves, opened dislocations and breaks, tearing of phalanxes of fingers of brush, guardianship, getting frost-bitten, combined damages off.

II. Contractoura Dyopyoitrena - roubtseve regeneration of palm's aponevroza, that gains character dense fibroznogo tyaga. Reasons: traumatic, endocrine, biochemical, nervous and other theories. Signs: display of hypodermic bulges at the level of distalnoi palm's fold. In a future - gradual development of bends contractour making to progress in metacarpal-phalanx and proximal interphalanx, and afterwards extension contractour in distal interphalanx joints.

In the flow of illness select the four degree of development of process and definite clear complex of medical measures in dependence on a degree.

At the I-II degrees the introduction to the roubtseve compression of skin of fourazolidonou with geparinom for rozsmoctouvannya is recommended, paraffin appliques, correcting gymnastics, zyomni thorns. At the III- IV degrees of process - complex medical treatment: hypodermic dissection of tyagiv and foregoing medical treatment.

II². Basic tasks in medical treatment of the opened trauma of brush - warning of festering processes and fight against an infection. These tasks successfully decide by early surgical treatment of wounds with their active drenouvannyam. Active washing of wound by solution of fouratsilinou and other solutions of antisepticiv during b-10 days allow to the minimum to lower development of infectious processes in a wound.

IV. Surgical treatment of wounds of brush:

Early hirouriichna treatment of wounds of brush is conducted at the receipt sick in permanent establishment, where the complete complex of vidnovlyovalnnh measures is executed. Advantages of her - abbreviation of terms of medical treatment, warning of second infection. Failing - difficulty of exposure of gittespromognosti fabrics.

Late treatment - careful rest room of skin, bandages with antisepticami, application of antibiotics. In 48 hours, in planned operation on all anatomic structures of hand is conducted. Advantages - carving of negittespromognih fabrics, possibility of implementation of primary reconstruve and basic planned operations. Failing - second infection of wound, hospital infection.

Saving principle lies in the basis of surgical treatment. Facilities of the plastic arts of skin: free and unintentional, the plastic arts for Crasovitovim, Parinim, Filatovim, Cochevim, dermatomna the plastic arts.

Employment 18

Theme: „Damage of bone of pelvic”

Entry. Among all breaks of skeleton of man of damage of cistoc of taza make 4,7% and belong to the group of heavy traumas, here they are observed mainly at the men (64%) of age capable of working. The damages of pelvic are often accompanied by a current, as a result of irritation of reflecsogennoi area and massive bleeding.

Most patients the shown urgent hospitalization and conducting of reanimation measures already on a befor hospitalization stage. The victims with the breaks of bone of pelvic are required by the grants of highly skilled help, that allows not only to store the life, but also evade the protracted loss of capacity and disability. Therefore theoretical and practical skills for the study of the given pathology have the important value for preparation of doctor.

Basic literature:

1. Yomashev G. S. Travmatologiya I ortopediya.- : Medicine, 1983.

2. Troubnicov In. F. Travmatologiya I ortopediya.- C.: «Vûsshaya school», 1986.

3. Smirnova L. And., Shoumada I. V. Practichescie zanyatiya on traomatologii I ortopedii.- C.: «Zdorove», 1984, 352 s.

-Äîäàòêîâà literature.

1. Textbook of anatomy of man

2. Textbook of radio-therapy.

3. Roucovodstvo on ortopedii I travmatologii.-Ì : Medicine, 1968, t. III.

4. Shcolnicov L. G. I soavt. Povregdeniya taza I pelvic organov.- : Medicine, 1966.- 272 s.

Before that how to pass to independed, familiarize with the purpose of practical employment.

General purpose: to capture the clinical and roentgenologic methods of diagnostics of different types of damage of taza and methods of medical treatment of the victims.

Concrete tasks:

To Be Able:

à) clinically to inspect the victim with the trauma of taza;

á) to give first medical help;

â) to interpret sciagrams.

To Know:

à) types of damage of taza;

á) typical localization of breaks;

â) classification, symptomatic of damages;

ã) differential diagnostics;

ä) existent methods of medical treatment, duration of disabled;

å) complication at the damages of taza and pelvic organs;

°) basic stages of rehabilitation.

Program of independent work of students at independed to practical employment.

Task 1. For verification of initial level of your knowledges from a normal anatomy, radio-therapy, topographical anatomy give writing answers for such questions:

1. By what cistcami well-educated pelvis?.

2. What muscles register to pelvic cistoc?

3. Topography of vessels and nerves of region of taza?

Task 2. On the basis of study of basic literature from the theme of employment give answers for such questions:

1. Principles and mechanism of breaks of cistoc of taza.

2. Classification of breaks of cistoc of taza.

3. Clinic, differential diagnostics and medical treatment of regional breaks of taza.

4. Clinic and medical treatment of breaks of taza with violation of pelvic ring, differential diagnostics of the united damages with the break of urinary bladder.

5. Clinic and medical treatment of vertical breaks of type Malgenya, differential diagnostics with the diagonal breaks.

6. Breaks of lobcovogo zchlenouvannya that differential diagnostics with the breaks of front pivciltsya, principles of medical treatment.

7. Clinic and medical treatment of breaks of vertlyogovoi zapadini, differential diagnostics of ïåðåëîìî-dislocations (central).

8. Principle of transporting imobilizatsii at the breaks of cistoc of taza.

9. Medical-labour examination at the breaks of taza.

10. Errors and complications at medical treatment of breaks of cistoc of taza.

Program of independent work of students on practical employment.

Task 3. Microcouratsiya.

1. To capture the receptions of êë³í³êî-roentgenologic inspection and diagnostics of the victim with the breaks cistoc of taza and their complications.

2. To be able to conduct clinical and roentgenologic differential diagnostics of different types of breaks of cistoc of taza.

3. To capture the method of local anaesthesia (vnoutrishnotazovaya novocaine anaesthesia for Shcoliicovim-Selivanovim), by the functional method of medical treatment: conclusions, hammock, skeletal self-control. To know a testimony to different methods of medical treatment of breaks of cistoc of taza, to be able to conduct transporting imobilizatsiyo.

Execution sequence :

1. During collection of anamnesis to pay attention to the mechanism of trauma (direct, indirect), type of traumatism, character and features of doshpitalnoi and hospital help.

2. Review: positions of the victim, visible deformations of taza, the state of soft fabrics (color, was swollen, hemorrhage).

3. Palpatsiya, local temperature of skin, local pain, position of bone appearances.

4. Determination of asymmetry of taza and bone appearances. Exposure of pain syndrome at the transversal compression of taza, at a transversal ecs-tsenrichnomou break, and vertical sgisnenni.

5. Interpretations of rentgeiogram: plane of fracture and character of displacement of wreckages.

6. Differential diagnostics and ground of diagnosis, choice of method of medical treatment.

7. Ground of êë³í³êî-roentgenologic data, addition by a teacher. Participation in the discussion of theme of employment by divided experience in an educational room.

Task 4. For verification of capturing you material of practical employment decide such tasks:

1. During a jump at a patient 14 years sharp pain appeared in the region of wing of ilium on the left. A patient can not take away leg ahead and go through sharp pain. However freely undertakes a step backwards and without pain unbends a leg

backwards. Objectively: it is present pri-pouhlist and hemorrhage in the region of front department of wing of the left ilium, at palpatsii in; to this region feels sharp to pain.

Your clinical diagnosis. Recommendations of tactic and method of medical treatment. Terms of renewal of capacity.

2. Patient 32 years, hammered together by a passenger car, taza complains on pain in a right half. It is exposed at a review: asymmetry of taza is not present, the expressed slight swelling in a right inguinal region, hemorrhage. At palpatsii there is sharp pain. Clinical symptoms Gabaya, the Lareya «sticking heel» - positive. On the sciagram of taza the break of lobcovoi is exposed and sidnichnih cistoc without displacement. Ground the mechanism of trauma, produce tactic of medical treatment, define the terms of renewal of capacity.

3. At sick 42 years the diagnosed vertical break of right half of taza with violation of neperervanosti pelvic ring in front and back departments with displacement of wreckages (type Malgenya). Realizable intensive protishocova therapy. The testimonies of gemodinamici were stabilized.

1. Basic principles of subsequent orthopaedic medical treatment. Order of measures.

2. Terms of imobilizatsii and renewals of capacity.

4. A patient in 31 fell down with to the balcony of a 4 floor. The state as heavy as a lead, adinamichniy, present pallor of skin covers, pulse 120 blows after 1 hv., arterial pressure - 65/40 rt. item, a stomach is moderately tense, at palpatsii sickly in lower departments. Palpatsiya and axial loading on a pelvis is also sickly. On the sciagram of cistoc taza noticeable break of lobcovih and sidnichnih cistoc from both sides with violation of neperervanosti front pelvic ring.

Formulate a primary diagnosis. What additional inspection must be conducted for clarification of diagnosis? Medical tactic.

5. Patient 43 years, at work in zaboi there was stisneniy between trolleys. At the removal of compression independently could not move. Complains on pain in a right inguinal region and promegeni, that increase at motions of extremities. Asymmetry of taza is not present. At palpatsii there is moderate tension of muscles in a right inguinal region and sharp pain. At the compression there is the taza on each side weak expressed strengthening of pain. Positive symptom of «sticking heel» to the right.

Ground a primary diagnosis. Additional inspection for his clarification. Medical tactic and terms of renewal of capacity.

Block of information.

Anatomic and functional aspects lie in the basis of classification of breaks of cistoc of taza.

1. Regional breaks and breaks of ostey, sidnichnih humps, coccyx, transversal break of aitchbone, breaks of wing of ilium (horizontal or vertical). At these

types of breaks functional durability of pelvic ring is saved, that allows to carry out conducting of early rehabilitation measures.

2. Breaks of pelvic ring without violation of him neperervanosti and odno- or bilateral breaks of the same branch of lonnoi bone, odno- or bilateral breaks of sidnichnih cistoc and breaks of one of branches of lonnoi bone from one side and sidnichnoi bone from the second. Durability of pelvic ring to the static loading goes down, but opornist is saved, which allows to conduct conservative medical treatment, that polyagae in the ligcovomou mode during 4 weeks.

3. Damage with violation of neperervanosti pelvic ring and vertical break of aitchbone or break of lateral mass of aitchbone, break of sacrum-iliac zchlenouvannya, vertical break of aitchbone and break of both branches of lobcovoi from one or two sides; break of lobcovoi and sidnichnoi cistoc from one or both sides, dug up simfiza, damage with simultaneous violation of neperervanosti front or back pivcilets (type Malgenya).

At these types of damages opornist taza is sharply violated. Medical treatment in permanent establishment is carried out in accordance with localization and type of damage. It is necessary to conduct the measures directed on the fight against shock (vnoutrishnotazovaya novocainova anaesthesia for Shcolnicovim-Selivanovim), orthopaedic conclusions on a hammock, if necessary skeletal vityaginnya for both extremities. Term of the ligcovogo mode 10-12 weeks.

Employment 19

Theme: «Damage of spine».

Entry. The damages of spine relatively to the breaks of bone of musculoskeletal system meet at working of mining and coal industry, and also among working - builders. The breaks of spine are observed in all his departments, but more frequent all - on most mobile: lumbar, neck and transitional departments. The damages of neck department relatively to the general trauma of spine are observed in 19%. Timely diagnostics and correctly select tactic and methods of medical treatment allow not only to pick up thread the function of spine and capacity of the victim, but also abbreviate the terms of medical treatment, posttraumatic deformations of spine, chronic radicoulit, paralysis, are warned, paralyses of extremities, that is heavy disability of the victim.

Basic literature.

1. Yomashev G. S. Travmatologiya I ortopediya.-M.: Medicine, 1983.

2. Troubnicov In. F. Travmatologiya I ortopediya.- C.: «Vûsshaya school», 1986.

3. Smirnova L. And., Shoumada I. V. Practichescie zanyatiya on travmatologii I ortopedii.- C. : «Zdorove», 1984, 352 s.

Additional literature.

1. Textbook of anatomy of man.

2. Textbook of rentgenolgic

Before that how to pass to independed familiarize with the purpose of practical employment.

General purpose: to capture clinical and roentgenologic diagnostics of breaks of spine, by the methods of transporting imobilizatsion and medical treatment.

Concrete tasks:

1. To know the mechanism of damages of spine and types of breaks of vertebrae.

2. To learn the clinical symptoms of breaks and damages.

3. To learn to interpret sciagrams at these damages.

4. To capture differential diagnostics of damage of spine.

5. To know the receptions of grant of the first medical aid, rules of transporting of the victims.

6. To know a testimony to the conservative and operative methods of medical treatment.

7. To capture the methods of complex conservative medical treatment of patients with the breaks of spine.

8. To know principles of surgical medical treatment of damages of spine.

9. To know the symptoms of complications at the damage of spine and methods of their prophylaxis.

10. To be able to define the terms of disabled of patient in dependence on weight and localization of damage of spine.

Program of independent work of students at independed work to practical employment.

Task 1. For verification of initial level of knowledges from a normal anatomy, give radio-therapy in written form to the answer for such questions:

1. What anatomo-biomechanical features of structure of spine?

2. Describe the normal sciagram of spine.

Task 2. On the basis of study of basic literature from the theme of employment give writing answers for such questions:

1. Describe the machineries of damage of spine, classification of damages.

2. Describe the method of inspection of the victim with a trauma spine.

3. Clinical and roentgenologic signs of breaks of spine in neck, pectoral and lumbar departments.

4. Conduct differential diagnostics of facture with same condition, by the damages of soft fabrics, in different departments of spine.

5. What breaks of spine belong to the group of complicated, their clinic and reasons of origin?

6. Types of imobilizatsii and transporting at the damages of spine.

7. Principles, testimony and patogenic ground of functional and combined methods of medical treatment of damages of spine.

8. What testimonies to the operative methods of medical treatment at the damages of spine?

9. Types of corsets and testimony to their application at the damages and breaks of spine.

10. Account for the reasons of possible complications at the breaks of spine.

11. Clinic, diagnostics and medical treatment of breaks of transversal and ostistih sprouts of vertebrae.

12. Terms of disabled at the breaks and damages of different departments of spine.

13. Social and labour rehabilitation at the breaks, damages of spine and their consequences.

Program of independent work of students on practical employment.

Task 3. Couratsiya.

By the I. methods of clinical inspection of patients with the breaks and damages of spine.

2. To capture differential diagnostics of damages of spine.

3. To learn to make and be able to ground the plan of conservative and operative medical treatment of the victim.

4. To know principles of rehabilitation of patients with the breaks and damages of spine, determination of terms of disabled of patients.

Execution sequence :

1. During collection of anamnesis to find out the mechanism of trauma, complaint of patient, preliminary medical measures.

2. Review of position of sick, extremities that presence of deformation of spine, localization of the slight swelling, hemorrhages.

3. Palpatsion and determination of pain at palpatsii of ostistih sprouts, paravertebral points, presence of the removed pain at the axial loading on a spine, determination of muscular tension.

4. Determination of active motions of extremities, sensitiveness, level of its violations.

5. Interpretation of sciagrams.

6. Differential diagnostics and diagnosis.

7. Ground of plan of medical treatment.

8. Ground of diagnosis, plan of medical treatment and defence of him at a teacher.

9. Discussion of theme of employment by divided experence.

Task 4. For verification of capturing you material of practical employment decide such tasks:

1. A patient 17 years dived and was butted at the bottom of river. Experienced sharp pain in a neck. By a miracle was reached bank. Felt brief faint in hands. It is exposed at a review: lordoz neck department of spine is smoothed out, a patient supports a head by hands. Motions in the neck department of spine are sharply limited. Positive symptom of the axial loading. At palpatsii of ostistih sprouts pain in an area S4-S5-S6. Tone of muscles, tendon reflexes, skin sensitiveness to the right and to the left without the changes. On the sciagrams of neck department of spine in two projections bone pathology is not exposed.

Your diagnosis? Tactic of conduct of doctor?

2. A patient 55 years acted with a diagnosis compression stable break of 12th pectoral vertebra, trangle shape deformation. Suffers by hypertensive illness of the II degree, by ischemic heart trouble. Made decision to conduct one moment reclinatsion after Davis. How correctly select method of medical treatment? If no, to what?

3. A patient 24 years fell down on feet from the balcony of 4th floor. Experienced sharp pain in the back. Independently to become ie can. At a review there is the present general lordozou in a lumbar department, visible with a naked eye the tension of muscles on the type of «vigciv». Motions in the lumbar department of spine are sharply limited through the increase of pain. The axial loading on a spine causes great pain. At palpatsii of ostistih sprouts pain in an area with XII pectoral on III lumbar, especially at palpatsii of ostistih sprouts with a simultaneous attempt to heave up the unbended feet. However the damage of spinal cord is not present.

Primary diagnosis. What inspection is needed for clarification of diagnosis? What method of medical treatment is shown to the given patient?

4. Patient 42 years struck by a stick on the back. Sharp pain in the lumbar department of spine, that increased at the least tension of muscles appeared. At a review there is the exposed slight swelling and bruise in the region of the III-IV lumbar vertebrae. Palpatsiya is sharply sickly, especially on the internal edge of long muscles of the back to the right. Palpatsiya of ostistih sprouts is moderately sickly. The symptom of the axial loading on a spine is negative. Primary diagnosis. Tactic and medical treatment.

5. A patient 36 years fell down from a height 25 meters on a head. The compression break of body of the VI neck vertebra without the damage of spinal cord happened as a result of trauma. Break stable. How to treat a patient?

6. Patient 20 years 6 of months ago had the compression break of the S-VI - I-go pectoral vertebra. The decline of height of front department of vertebra was on 1/4 heights of body. Treated oneself by a functional method in permanent establishments during 2,5 months.

Serious complaints are not present now. Tone of muscles of the back is good. A «swallow» retains during 4 minutes. Insists on returning to labour. Speciality - autoslesar. Ground tactic of subsequent medical treatment.

7. A patient 42 years complains on pain in the lumbar department of spine, that radiyoyot in lower extremities, on a rapid fatigue, periodic attacks of radicoulit. In anamnesis: trauma in roadtrafic accident 6 years ago. After this case treated oneself in permanent establishment during 3 weeks concerning the concussion of the brain And degree, breaks of the VI- VII-VIII ribs to the right. The back was ill. A doctor linked pains to the blow, that happened during roadtrafic accident. Through a year after a trauma became ill on radicoulit concerning which 4-5 times per a year treated oneself out-patient's clinic and in permanent establishments. pains do not disappear fully. In the period of the last hospitalization there is the conducted sciagraphy, the decline is exposed on the 2/z heights of body of the second lumbar vertebra. The last a bit comes forward beforehand. A structure is well-kept. Your diagnosis? Conduct differential diagnostics.

8. At a patient 40 years there is the break of 12-pectoral vertebra with the complete breaking of spinal cord at this level. Name basic directions in medical treatment of spinal patients.

Block of information.

The breaks of vertebrae are stable and unstable.

Such breaks which the back area of vertebra is whole for are considered the stable breaks, that is handles and joint sprouts are not damaged, and consequently there is no danger of additional displacement of wreckages of vertebrae and compression of spinal cord.

The unstable breaks of vertebrae have a tendency to additional displacement of wreckages, as a result of break of handles or joint sprouts. Therefore the victim with the unstable breaks of vertebrae contra-indicated odnomomentna repozitsiya for Belerom or Davis.

2. At the explosive breaks of bodies of vertebrae at the young victims the front spondilodez is the method of choice, and at people declining years functional method of medical treatment after In. In. Gorinevscoyo.

3. To the Spinal patients, that have the damage of spinal cord, the shown providing by prosthetic wares and social rehabilitation taking into account professional possibilities and queries.

Employment 20.

Theme: « politrauma and united damages».

Entry. The mechanical trauma of organs and systems is distributed on isolated (monotrauma) and politrauma. The damage of one organ is named the isolated damages, or relatively to musculoskeletal system damage within the limits of one anatomic segment (bone, joint).

Stormy development of transport, techniques and building, intensification of production are accompanied by growth of traumatism in the structure of which part of plural and united damages is multiplied.

Plural mechanical traumas - this damage the two or more of internal organs in one cavity, and also damage the two or more of functional segments of musculoskeletal system.
The simultaneous damages of internal organs are considered the united damages in the two or greater cavities or damage of internal organs and musculoskeletal system.Combined which name the damage are got from various injuring factors: mechanical, thermal, radiation and other.

Presently in world literature and practice it is accepted to consider plural and combination of damage, as polisystemic and poliorganni.

Polisystemic and the poliorganni damages from data of different authors make from 50% to 82,5% all damages and have a firm tendency to growth, both after a quantity, and after the volume of defeats. It is needed to volunteer the remark that above all things polisytstemic grows - the most heavy trauma.

Polisystemic and a poliorganic trauma is very difficult and dangerous for the life pathology, that drives the to death victims to 12-95% cases, depending on a volume, character and localization of damage. More frequent (almost 50%) all there is connection of trauma of musculoskeletal systemand cranial trauma.

Plural, united and the combined damages are characterized by the special weight of clinical displays, are accompanied by considerable violation vitally of important functions of organism, by difficulties during diagnostics, by complication in medical treatment, considerable from sotcom invalidizatsii and death rate of the victims. Such damages are always accompanied by traumatic shock, large blood loss, by disorders in the systems of circulation of blood and breathing, and sometimes and the terminal state.

In the last 10-15 years in scientific literature and a term is in practice used «politrauma».

Politrauma - it is an aggregate the two or more of defeats, which need the specialized medical treatment the character of which relies on the features of each of damages and from their mutual influence on an organism. This there is confessedly notion which indicates on a presence at the patient of plural and united damages of musculoskeletal system and internal organs. Clearly, that direct translation of term lights the quantitative side of damage only and does not in any way indicate on high-quality. This reason is a solid argument for many theorists and practical workers which do not acknowledge a term «politrauma».

However the life brings in corective. A term «politrauma» is wide-spread and rooted in among the medical workers of different specialities, especially for those, who is engaged in the grant of ursent traumatological help. A short word «politravma» presents by itself the character of alarm, which characterizes complication of damage, and grave common condition of patient, and presence of shock, blood loss and other.

Simultaneously - it is the appeal to the grant of help to such patients on all stages: at transporting, in the induction centre, services of reanimation, operating. Especially this am important in becoming and development of medicine of catastrophes.

Frequency of politraumi makes 5-8% from all damages the vehicle of motion and support of internal organs.

On the first place by the factor of origin of politravmi the road-transport adventures stand - from 50-70% all accidents, on fall from a height, which arrive at 23-40%.

Politravma - it is not simple aggregate of breaks and damages of internal organs. It is the row of pathological somatic reactions, which Clarc in 1955ð. named «traumatic illness». She is characterized by difficult and scalene pathogenic, in a sharp period which no signs of break on the first plan, and violation of vital functions which threaten to the life of patient.

Traumatic illness has how specific so unspecific signs are. To the specific displays belong above all things outbreak, almost complete absence of latent term, presence of morphological to acute damage and conditioned by this loss of blood circulation and most important - specific reactions of organs, that are damaged hypoxia after a traumatic-anaemic character. By the way, exactly determine specificity of reactions of organs and systems on the damage polymorphism of clinical picture of traumatic illness.

To the unspecific signs of traumatic illness the system pathological and somatic postagresivni reactions of organism belong also (pain, fevers, declines of adaptation, in particular immune backlogs, different infectious complications and other).

Not touching deeply pathogeny of traumatic illness it is needed to mark that in the plan of development of this illness there is the such threatening for the life state, how moultisystemic organ insufficiency is. He is characterized by sharp tension of function of many organs and systems, above all things systems of life-support (circulatory system and systems of the external breathing). When insufficiency achieves a critical level the death of the victim comes. It is needed to volunteer the remark that lethality among patients with poliorganic insufficiency arrives at 20-25%.

Politravma (traumatic illness) is characterized by such features:

1. Always there is the syndrome of mutual burden.

2. Quite often combination of damages creates the situation of impossibility of conducting of those or other medical measures. For example, at the damage of musculoskeletal system at the grant of help and medical treatment shown narcotic analegic, however at combination with a cranial-cerebral trauma they will be contra-indicated, and other.

3. Part of complications which result in the critical state is multiplied (massive blood loss, toxmia, fatty embolism and other).

4. There is disguise of clinical symptoms at the cranio-abdominal damages, damages of spine, stomach and other, that conduces to the diagnostic errors.

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Purpose of employment: to capture the clinical and roentgenologic methods of diagnostics, to conduct differential diagnostics and make the medical program depending on localization and character of damage at politravmi.

A student must:

1. To be able clinically and roentgenologic inspect the victims with the plural damages.And

2. To be able to define anchorwomens clinical displays.

3. To capture the methods of previous repozitsii and imobilizatsii.

4. To capture diagnostics of complications, by the methods of their prophylaxis and medical treatment.

5. To know testimonies, principles of operative medical treatment of damages, terms of imobilizatsii and losses of capacity.

6. To ground the plan of functional and physical therapy medical treatment after consolidation of wreckages.

Program of independent work of students at indepented to practical employment.

Task 1. For verification of initial level of knowledges from an anatomy, radio-therapy, pathological anatomy and physiology give an answer for the following questions:

1. Mechanical trauma. Characteristic local and general displays. Morphological changes.

2. Traumatic shock. Pathogeny, phases, changes in internal organs.

3. Inflammation. Morphology and pathogeny of inflammation. What aseptic inflammation from septic differs by?

4. Features of anatomic structure of overhead extremity.

5. Features of anatomic structure of lower extremity.

Task 2. On the basis of study of literature on the theme of employment of date writing answer for the following questions:

1. clinical signs of traumatic shock depending on weight of phase.

2.To do differential diagnostics of breaks of bone

3. Differential diagnostics of plural breaks of bone of trunk and damages of internal organs.

4. Transport imobilizatsiya at the damages of extremities, spine.

5. Testimonies, principles and methods of the local anaesthetizing, explorer anaesthesia and novocaine blockades at the plural breaks.

6. Conduct differential diagnostics of breaks, dislocations and frature-dislocations of areas of large joints.

7. Principles and testimonies to conservative medical treatment of plural breaks and united damages.

8. What testimonies, principles and methods to operative medical treatment of plural breaks.

9. Terms of imobilizatsii at the plural breaks and damages of overhead and lower extremities. Terms of disabled.

10. What features of medical treatment of opened polifracture? Volume, term of conducting of primary surgical treatment of wounds.

11. Prophylaxis and principles of medical treatment of festering complications at the plural and united damages.

12. Principles of rehabilitation of patients at the given damages.

Block of information.

Politravma most often meets after the travel-transport adventures. For this type of traumas the damage of bone of a few segments of lower extremities with the simultaneous defeat of soft fabrics as a large removing of skin a layer by a layer is typical, separation of muscles from bone, damage of nervous and vascular educations. Enough often the damage of extremities is accompanied by a cranial-cerebral trauma, by the trauma of belly and thorax.

Falling from a height mainly meets in the way of life and the character of damages relies on the height of falling, position of man, cruelties of surface. Symmetry of defeat of lower extremities is typical. The damage is accompanied by the breaks of spine, pelvic, by a cranial-cerebral trauma.

In a recent year considerable part among the factors of the united and plural damages there is a criminal traumatism which is characterized foremost by the damages of pectoral and cranial cavity by vognepalnimi facilities.

Their localization is the characteristic feature of work accidents, overwhelming damage of overhead extremities with the defeat of a few segments.

Principles of diagnostics.

Difficulties of early diagnostics of damages at politraumi are conditioned by different factors: by the grave condition of the victims, mutual stratification of symptoms, by disguise of typical signs, changing pain sensitiveness and in. Diagnostic researches are carried out consistently, systematic, simultaneously with the grant of stage help, reanimation and medical treatment. In spite of multiplicity of damages, in the clinical picture of politrauma it is necessary to select a few basic traumatic hearths, directly threatening to the life of the victims. Research of musculoskletal system is carried out in a few stages. Only the careful repeated research of every segment of extremities and skeleton of trunk, verification of function of every joint guarantee against errors.

The program of help the victim with politraumic on a hospitallige stage consists in the following:

1. Timely arrival of brigade of first-aid to the place of event.

2. Estimation of weight of the state and exposure of threatening to the life violations of breathing and circulation of blood.

3. Conducting of reanimation help sharp disorders of basic vital functions.

4. Reference diagnostics of plural breaks of bone, exposure of the most heavy damages.

5. Conducting of anaesthetizing and imobilizatsii damaged segments.

6. Rapid hospitalization.

In motion politraumi (traumatic illness) distinguish a few periods. To now there are a lot of classifications, however most widespread on Ukraine there is classification And. I. Deryabina (1987), which separates three periods of illness:

1. Sharp period (has three stages):

à) stage of shock (duration a few o'clock of -doba);

á) stage of unstable adaptation (by duration to 7 days). In this stage poliorganna insufficiency can come in the case of decompensation of one of the systems of organism;

in)ñòàä³ÿ firm adaptation or stabilization (to 3-4 weeks).

2. Period of reconvalestsentsii (by duration to 10 and anymore weeks depending on the primary state of organism, heavy and volume of damage).

3. Period of rehabilitation. In this period all functions of organism must be renewed and in the last turn - function of support and motion.

Sometimes the easy, middle and heavy forms of traumatic illness will be selected also.

Basic principles of treatment of the victim with the plural and united breaks bone:

The I. Zberegennya life of the victim.

2. anatomic violations of skeleton, which hinder to normal activity vital (skull, thorax, spine, pelvis).

3. Renewal of anatomic structure and function of the damaged extremities.

At medical treatment of plural breaks conservative and operative methods are used.

Conservative medical treatment consists in closed repozitsii of wreckages and following by an imobilizatsii gipseous bandage.

Skeletal traction at medical treatment of plural and opened breaks of bone of thigh, leg, pelvic, on today has the limited use.

Operative medical treatment is used in 34-40% cases. For internal (dipping) osteosyntesis intramedular bars, screws, plates and in., are used

Introduction in practice of methods of compression-distraction osteosyntesis gave new possibilities in medical treatment of plural damages, allowed to carry out repozitsiyo and fixing of wreckages without direct interference in to the area of break. Minar trama is advantage of this method, possibility of avoidance of gipseous imobilizatsii, possibility of supervision after a skin and soft fabrics, saving of mobile in the joints of the damaged extremities.

The special problem is medical treatment of the opened plural breaks. Enormous destructions of skeleton and soft fabrics at the plural damages considerably lower all staggered segment, and sometimes and all extremity.

Primary surgical treatment of wounds, wide draining is the basic mean of prophylaxis of festering complications at the opened damages, of long duration washing by antiseptic solutions, antibacterial therapy. The Imobilisation wreckages is carried out by gipseous bandages, by the vehicles of the external fixing.

The results of medical treatment of the united damages remain not enough consoling. Lethality makes 20-27%. The reasons of mortal output are sharp loss of blood, heavy damages of cerebrum, sharp respiratory insufficiency. The real ways of decline of lethality - early diagnostics, more perfect methods of correction of heavy violations, active tactic of medical treatment of damages of musculoskeletal system.

List of obligatory practical skills from traumatologii and orthopaedic for the students of medical faculties:

1. Measuring of relative and anatomic length of extremities and segments, determination of the functional shortening of leg.

2. Measuring of volume of motions in the joints of extremities (active and passive).

3. To be able to determine the presence of free liquid to the r cavity of joints.

4. To be able to interpret sciagrams with the diseases and damages of musculoskeletal system.

5. Transport imobilizatsiya at the damages:

overhead extremity

lower extremity

spine

pelvic.

6. Local anaesthesia at the breaks for Ya- Belerom.

7. Preparation of gipseous bandages and plaster.

8. Imposition of plaster, circular gipseous bandages.

9. The Znyaigya gipseous bandages.
10 Imposition of skeletal traction

11.repozitsiya breaks:

radial bone in a typical place

humeral bone in the region of surgical neck.

12. Removal of dislocations:

shoulder

forearm

And finger of hand.

13 aspiration of knee-joint.

14. Clinical diagnostics of displazii of hip joint.

15. Roentgenologic diagnostics of displazii of hip joint.

16. Correcting gymnastics at the nee lacks of development of aparata support and motion:

at displazii of hip joint

at congental muscular there is torti colli

at a nee pigeon-toe.

IOu. Application of orthopaedic wares at medical treatment of congental lacks of development of musculoskeletal system.

Chart of abstract hospital chart .

1. Passport part.

2. Complaints of patient in the moment of inspection.

3. Anamnesis of disease.

4. Anamnesis of life.

5. The common state of patient (circulatory, respiratory, digestive, extertory systems).

6. Objective orthopaedic inspection (review, palpatsiya, measuring of lengths and inspection of function of extremities).

7. Description of sciagrams of segments which inspect.

8. Data of laboratory researches.

9. The grounded credible diagnosis.

10. Differential diagnosis.

11. Final diagnosis.

12. Mechanism of trauma (etiopatogenez diseases from literary data and characteristic clinical signs).

13. Methods of medical treatment of a similar trauma (disease) depending on duration of illness, stage, age and etc.

14. The grounded plan of medical treatment of sick.

15. Possible errors and complications.

16. The grounded prognosis for the life, convalescence, capacity.

17. List of literature.

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