

**MINISTRY OF HEALTH OF THE REPUBLIC OF MOLDOVA**  
***NICOLAE TESTEMITANU***  
**STATE UNIVERSITY OF MEDICINE AND PHARMACY**

Chair of Alternative and Complementary Medicine

**Irina Șincarenco**

**ACUPUNCTURE: INDICATIONS,  
CONTRAINDICATIONS AND ADVERSE EVENTS**

*(Methodical recommendation)*

Chisinau, 2023

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The methodical recommendation was designed as a methodical guide for medical students from the Faculty Medicine, for the discipline of Complementary and Alternative Medicine on the theme „Indications, contraindications and complications of acupuncture” and contains up-to-dated information regarding the clinical indications and contraindications for acupuncture adapted to the WHO International Classification of Diseases and Related Health Problems 10th Revision (ICD-10), classification and causes of possible complications of acupuncture and methods of their prevention included in the curriculum.

The recommendations for the practical lessons and theoretical course on alternative and complementary medicine correspond to the residency program in Medical Rehabilitation and educational program for acupuncture practitioners.

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## INTRODUCTION

**Study Program:** 0912.1 Medicine (Integrated studies).

**Disciplines:** Complementary and Alternative Medicine.

**Type of course:** compulsory discipline.

**Theme:** Acupuncture: indications, contraindications and adverse events.

**The purpose of the paper:** to cultivate students' theoretical knowledge about the clinical indications and contraindications for acupuncture, classification and causes of possible complications during the acupuncture session and methods of their prevention.

**Form of training:** Seminar and practical lesson.

**Duration:** 4 hours.

### **The objectives of the practical work**

At the end of the discipline study the student will be able to:

- to know the advantages of acupuncture;
- to know the indications of acupuncture;
- to know the contraindications of acupuncture;
- to know the possible complications during the acupuncture session and countermeasures and prevention measures.

### **Subjects for control students' knowledge:**

1. Benefits of acupuncture.
2. WHO recommendation for acupuncture treatment.
3. Clinical indications for acupuncture.
4. Classification of contraindications of acupuncture.
5. Psychological contraindications of acupuncture.
6. Physiological contraindications of acupuncture.
7. Anatomical contraindications of acupuncture.
8. Clinical contraindications of acupuncture.
9. Contraindications of acupuncture related to weather factors and seasons of the year.
10. Classification and causes of adverse events of acupuncture.

11. Prevention of complications before acupuncture.
12. Prevention of complications during acupuncture.
13. Adverse events and their prevention during moxibustion.
14. Adverse events and their prevention during the cupping procedure.

The methodical recommendation was designed as a methodical guide for medical students from the Faculty Medicine, for the discipline of Complementary and Alternative Medicine on the theme „Indications, contraindications and complications of acupuncture” and contains up-to-dated information regarding the clinical indications and contraindications for acupuncture adapted to the WHO International Classification of Diseases and Related Health Problems 10th Revision (ICD-10), classification and causes of possible complications of acupuncture and methods of their prevention included in the curriculum.

The recommendations for the practical lessons and theoretical course on alternative and complementary medicine correspond to the residency program in Medical Rehabilitation and educational program for acupuncture practitioners.

Acupuncture and moxibustion are important component procedures in Traditional Chinese Medicine which prevent and treat diseases by puncturing certain points on the body with needles or applying heat with ignited moxa wool. Of marked efficacy and requiring but simple equipment, they have been widely popular in China and elsewhere for thousands of years and are popular in the treatment of different diseases in many countries nowadays.

Acupuncture treatment is safe if it is performed properly by a well-trained doctor, it is non-toxic, and adverse events are minimal. This method has many benefits [1, 2, 31, 41, 66, 88, 91, 92, 93]:

- It is particularly effective for the treatment of various diseases either combined with medication or not. The use of acupuncture does not hamper any medication or invasive procedure. On the contrary, it can enhance other treatments.

- It is effective even in cases that medication can't bring the desired results.
- Reduces symptoms of chronic degenerative diseases but also helps in reducing medication dosage.
- Treats acute or chronic pain.
- Strengthens and generally rejuvenates the body.
- Short duration of treatment (the needles remain in the body for about 20 to 30 minutes).
- It has a long duration of action (months or years).
- It is a safe treatment with an extremely low probability of adverse events (that is why it must be applied exclusively by doctors).
- It is painless. Upon insertion of the needle, you may feel a slight pinch, but it is not painful. Once the needle is inserted to the correct depth and after the appropriate handling, the patient might feel a tingling sensation, but the needle is usually not felt at all. People generally find acupuncture very relaxing.
- It can be applied to all ages.
- It has an affordable cost.

The World Health Organization recommends acupuncture for over 100 conditions [2, 68, 73].

The current list of clinical guidelines for acupuncture includes:

- acute and chronic pain syndromes;
- functional disorders of organs and systems;
- prophylaxis of recurrence of chronic diseases, functional disorders, certain symptoms and syndromes;
- rehabilitation of patients after injuries and surgeries;
- acute and chronic diseases, pain syndromes, trauma in athletes, in which the application of drug treatment is undesirable due to the possible manifestation of the doping effect of some pharmacological preparations;

- the necessity to increase the body's resistance and immunity during the recovery period after acute infections and illnesses with persistent evolution;
- the necessity to amplify the action of spa factors;
- meteorological and balneological reactions, which appeared during the sanatorium treatment;
- the necessity to amplify the adaptive capacities of the organism and the prophylaxis of pathological reactions to stress in conditions of unfavorable action of potentially pathogenic factors of various etiology (stress due to physical or psycho-emotional effort, hypodynamics, monotony, other unfavorable working conditions).

A detailed analysis of modern and ancient literature, as well as rich practical experience of therapeutic application of acupuncture at the Chair of Alternative and Complementary Medicine of the *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova [30-36, 81-85, 94, 95], made it possible to systematize the indications and contraindications of acupuncture, and also adapt them to the WHO International Classification of Diseases and Related Health Problems 10th Revision (ICD-10) [27].



**I. Clinical indications for acupuncture adapted  
to the WHO International Classification of Diseases  
and Related Health Problems 10th Revision (ICD-10)<sup>1</sup>**

<i>Code ICD-10</i>	<i>Nosological forms or conditions</i>
<b>Chapter V. Mental and behavioural disorders (F00-F99)</b>	
<i>Organic, including symptomatic, mental disorders (F00–F09)</i>	
F06.7	Mild cognitive disorder
F07.2	Postconcussional syndrome
<i>Mental and behavioural disorders due to psychoactive substance use (F10–F19)</i>	
F10.2	Mental and behavioural disorders due to use of alcohol. Dependence syndrome
F10.3	Mental and behavioural disorders due to use of alcohol. Withdrawal state
F10.6	Mental and behavioural disorders due to use of alcohol. Amnesic syndrome
F17.2	Mental and behavioural disorders due to use of tobacco. Dependence syndrome
F17.3	Mental and behavioural disorders due to use of tobacco. Withdrawal state
<i>Mood [affective] disorders (F30–F39)</i>	
F32.0	Mild depressive episode
F32.1	Moderate depressive episode
<i>Neurotic, stress-related and somatoform disorders (F40-F48)</i>	
F40.-	Phobic anxiety disorders*
F41.-	Other anxiety disorders*
F43.1	Post-traumatic stress disorder*
F45.-	Somatoform disorders*
F48.0	Other neurotic disorders*
F48.8	Other specified neurotic disorders
F48.9	Neurotic disorder, unspecified
<i>Behavioural syndromes associated with physiological disturbances and physical factors (F50-F59)</i>	

F50.-	Eating disorders
F51.-	Nonorganic sleep disorders *
F52.-	Sexual dysfunction, not caused by organic disorder or disease
F53.0	Mild mental and behavioural disorders associated with the puerperium, not elsewhere classified (except: puerperal psychosis)
<i>Disorders of psychological development (F80–F89)*</i>	
F80.0	Specific speech articulation disorder
F80.8	Other developmental disorders of speech and language
F81.-	Specific developmental disorders of scholastic skills
<i>Behavioural and emotional disorders with onset usually occurring in childhood and adolescence (F90–F98)*</i>	
F90.-	Hyperkinetic disorders
F91.-	Conduct disorders
F92.-	Mixed disorders of conduct and emotions
F95.0	Transient tic disorder
F98.0	Nonorganic enuresis
F98.1	Nonorganic encopresis
F98.5	Stuttering [stammering]
<b>Chapter VI. Diseases of the nervous system</b>	
<i>Extrapyramidal and movement disorders (G20–G26)</i>	
G24.-	Dystonia*
<i>Episodic and paroxysmal disorders (G40–G47)</i>	
G43.-	Migraine*
G44.-	Other headache syndromes*
G47.-	Sleep disorders*
<i>Nerve, nerve root and plexus disorders (G50–G59)</i>	
G50.-	Disorders of trigeminal nerve*
G51.-	Facial nerve disorders*
G52.-	Disorders of other cranial nerves*
G53.0* (B02.2+)	Postzoster neuralgia*

G54.-	Nerve root and plexus disorders (radicular syndrome)
G55.1* (M50-M51.+)	Nerve root and plexus compressions in intervertebral disc disorders
G55.2* (M47.-+)	Nerve root and plexus compressions in spondylosis
G55.3* (M45-M46.-+, M48.-+, M53-M54.-+)	Nerve root and plexus compressions in other dorsopathies
G55.8*	Nerve root and plexus compressions in other diseases classified elsewhere
G56.-	Mononeuropathies of upper limb*
G57.-	Mononeuropathies of lower limb*
G58.-	Other mononeuropathies
G59.0* (E10-E14+)	Diabetic mononeuropathy
<i>Polyneuropathies and other disorders of the peripheral nervous system (G60–G64)</i>	
G61.-	Inflammatory polyneuropathy
G62.-	Other polyneuropathies
G63.2* (E10-E14.4+)	Diabetic polyneuropathy (proximal, distal, sensomotor)
G63.3* (E00-E07.-+; E28-E29.-+)	Polyneuropathy in other endocrine and metabolic diseases
G63.0* (B02.2+)	Polyneuropathy in infectious and parasitic diseases classified elsewhere (postherpetic)
G63.6* (M02-M25+; M40.-, M60-M63+; M65.-+; M67.-+; M70-M79+; M91-M94+)	Polyneuropathy in other musculoskeletal disorders
G63.8*	Polyneuropathy in other diseases classified elsewhere
<i>Diseases of myoneural junction and muscle (G70–G73)</i>	
G71.1	Myotonic disorders (atrophic, dystrophic, chondrodystrophic)

G72.-	Other myopathies
G73.7*	Myopathy in other diseases classified elsewhere
G73.7* (M06.0+)	Myopathy in rheumatoid arthritis
	<i>Cerebral palsy and other paralytic syndromes (G80–G83)</i>
G80.-	Cerebral palsy (moderate spastic, dystonic forms)
G81.-	Hemiplegia (except: G81.0 Flaccid hemiplegia) (residual phenomena after poliomyelitis with flaccid hemiparesis)
G82.1	Spastic paraplegia
G82.2	Paraplegia, unspecified
G83.-	Other paralytic syndromes
	<i>Other disorders of the nervous system (G90–G99)</i>
G90.-	Disorders of autonomic nervous system
G93.3	Postviral fatigue syndrome
G93.4	Encephalopathy, unspecified
	<b>Chapter VII. Diseases of the eye and adnexa</b>
	<i>Disorders of eyelid, lacrimal system and orbit (H00–H06)</i>
H00.0	Hordeolum and other deep inflammation of eyelid
H01.1	Noninfectious dermatoses of eyelid
H02.2	Lagophthalmos
H02.4	Ptosis of eyelid
H04.0	Dacryoadenitis*
H04.1	Other disorders of lacrimal gland
H04.4	Chronic inflammation of lacrimal passages (chronic dacryocystitis)*
H05.1	Chronic inflammatory disorders of orbit
	<i>Disorders of conjunctiva (H10–H13)</i>
H10.1	Acute atopic conjunctivitis*
H10.4	Chronic conjunctivitis*
H10.5	Blepharconjunctivitis
	<i>Disorders of sclera, cornea, iris and ciliary body (H15–H22)</i>
H15.0	Scleritis

H15.1	Episcleritis
H16.2	Keratoconjunctivitis
H20.-	Iridocyclitis*
<i>Disorders of lens (H25-H28)</i>	
H25.0	Senile incipient cataract
<i>Disorders of choroid and retina (H30-H36)</i>	
H30.-	Chorioretinal inflammation
H34.0	Transient retinal artery occlusion
H35.0	Background retinopathy and retinal vascular changes
H35.3	Degeneration of macula and posterior pole
H35.4	Peripheral retinal degeneration
H35.6	Retinal haemorrhage (subacute stage)
H36.0* (E10-E14+)	Diabetic retinopathy
H36.8 (I70.8+)	Atherosclerotic retinopathy
<i>Glaucoma (H40-H42)</i>	
H40.1	Primary open-angle glaucoma
<i>Disorders of vitreous body and globe (H43-H45)</i>	
H43.1	Vitreous haemorrhage (subacute stage and recuperation)
<i>Disorders of optic nerve and visual pathways (H46-H48)</i>	
H46	Optic neuritis (except retrobulbar neuritis caused by intracranial hypertension)
H47.2	Optic atrophy (partial, nontoxic)*
H48.-	Disorders of optic [2nd] nerve and visual pathways in diseases classified elsewhere
<i>Disorders of ocular muscles, binocular movement, accommodation and refraction (H49-H52)</i>	
H49.0	Third [oculomotor] nerve palsy
H49.1	Fourth [trochlear] nerve palsy
H49.2	Sixth [abducent] nerve palsy
H50.0	Convergent concomitant strabismus (nonparalytic)
H50.1	Divergent concomitant strabismus (nonparalytic)
H51.1	Convergence insufficiency and excess

H52.2	Astigmatism (acquired)*
H52.5	Disorders of accommodation*
<i>Visual disturbances and blindness (H53-H54)</i>	
H53.0	Amblyopia ex anopsia
H53.1	Subjective visual disturbances. Asthenopia
H53.2	Diplopia
<i>Other disorders of eye and adnexa (H55-H59)</i>	
H55	Nystagmus and other irregular eye movements
H57.0	Anomalies of pupillary function
<b>Chapter VIII. Diseases of the ear and mastoid process</b>	
<i>Diseases of middle ear and mastoid (H65-H75)</i>	
H65.-	Nonsuppurative otitis media*
<i>Diseases of inner ear (H80-H83)</i>	
H81.-	Disorders of vestibular function
<i>Other disorders of ear (H90-H95)</i>	
H90.-	Conductive and sensorineural hearing loss
H91.-	Other hearing loss
H93.-	Other disorders of ear, not elsewhere classified
<b>Chapter IX. Diseases of the circulatory system</b>	
<i>Hypertensive diseases (I10-I15)</i>	
I10	Essential (primary) hypertension
I11.9	Hypertensive heart disease without (congestive) heart failure
<i>Ischaemic heart diseases (I20-I25)</i>	
I20.-	Angina pectoris
I25.0	Atherosclerotic cardiovascular disease, so described
I25.1	Atherosclerotic heart disease
I25.2	Old myocardial infarction
<i>Cerebrovascular diseases (I60-I69)</i>	
I63.3	Cerebral infarction due to thrombosis of cerebral arteries (ischemic stroke, subacute and recuperation period)
I67.2	Cerebral atherosclerosis

I67.4	Hypertensive encephalopathy (stage I-II)
I69.3	Sequelae of cerebral infarction
I69.4	Sequelae of stroke, not specified as haemorrhage or infarction
<i>Diseases of arteries, arterioles and capillaries (I70-I79)</i>	
I70.2	Atherosclerosis of arteries of extremities
I73.-	Other peripheral vascular diseases
I79.2*	Peripheral angiopathy in diseases classified elsewhere
I79.2* (E10-E11+)	Diabetic peripheral angiopathy
I79.2* (T75.2+)	Peripheral angiopathy in effects of vibration
<i>Diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified (I80-I89)</i>	
I83.-	Varicose veins of lower extremities
<i>Other and unspecified disorders of the circulatory system (I95-I99)</i>	
I95.-	Hypotension
<b>Chapter X. Diseases of the respiratory system</b>	
<i>Acute upper respiratory infections (J00-J06)</i>	
J05.0	Acute obstructive laryngitis [croup]*
<i>Other acute lower respiratory infections (J20-J22)</i>	
J20.9	Acute bronchitis, unspecified (tracheobronchitis)* (in those under 15 years of age)
<i>Other diseases of upper respiratory tract (J30-J39)</i>	
J30.-	Vasomotor and allergic rhinitis*
J31.0	Chronic rhinitis*
J31.2	Chronic pharyngitis*
J32.-	Chronic sinusitis*
J35.0	Chronic tonsillitis*
J37.-	Chronic laryngitis and laryngotracheitis*
J38.5	Laryngeal spasm
<i>Chronic lower respiratory diseases (J40-J47)</i>	
J40	Bronchitis, not specified as acute or chronic (tracheobronchitis) (in those 15 years of age and above)

J41.0	Simple chronic bronchitis
J42.-	Unspecified chronic bronchitis
J44.8	Other specified chronic obstructive pulmonary disease (Chronic obstructive bronchitis)
J45.-	Asthma (gr. I-II)*
J46	Status asthmaticus (gr. I)*
J47	Bronchiectasis (gr. I)
<i>Other diseases of the respiratory system (J95-J99)</i>	
J98.0	Diseases of bronchus, not elsewhere classified (bronchospasm)
<b>Chapter XI. Diseases of the digestive system</b>	
<i>Diseases of oral cavity, salivary glands and jaws (K00-K14)</i>	
K04.0	Pulpitis
K04.5	Chronic apical periodontitis
K05.1	Chronic gingivitis
K05.3	Chronic periodontitis*
K05.4	Periodontosis
K07.6	Temporomandibular joint disorders
K08.8	Other specified disorders of teeth and supporting structures (including toothache)
K11.7	Disturbances of salivary secretion
K12.0	Recurrent oral aphthae (aphthous stomatitis)
K14.0	Glossitis (chronic superficial)
K14.6	Glossodynia (and glossalgia)
<i>Diseases of oesophagus, stomach and duodenum (K20-K31)</i>	
K20	Oesophagitis
K21.-	Gastro-oesophageal reflux disease
K22.0	Cardiospasm (reflector)*
K22.4	Dyskinesia of oesophagus*
K25.9	Gastric ulcer unspecified as acute or chronic, without haemorrhage or perforation
K26.9	Duodenal ulcer unspecified as acute or chronic, without haemorrhage or perforation
K27.7	Peptic ulcer, site unspecified, without haemorrhage or



	perforation
K28.7	Gastrojejunal ulcer (ulcer anastomotic), without haemorrhage or perforation
K29.-	Gastritis and duodenitis*
K30	Functional dyspepsia (indigestion)
K31.3	Pylorospasm, not elsewhere classified*
K31.8	Other specified diseases of stomach and duodenum*
<i>Noninfective enteritis and colitis (K50-K52)</i>	
K51.-	Ulcerative colitis
K52.-	Other noninfective gastroenteritis and colitis
K52.2	Allergic and dietetic gastroenteritis and colitis
<i>Other diseases of intestines (K55-K64)</i>	
K58.-	Irritable bowel syndrome*
K59.-	Other functional intestinal disorders
K62.8	Other specified diseases of anus and rectum
K63.8	Other specified diseases of intestine (chronic proctosigmoiditis)
<i>Diseases of liver (K70-K77)</i>	
K73.-	Chronic hepatitis, not elsewhere classified (noninfectious)
<i>Disorders of gallbladder, biliary tract and pancreas (K80-K87)</i>	
K81.1	Chronic cholecystitis (without calculus)
K82.8	Other specified diseases of gallbladder (including Dyskinesia gallbladder and biliary tract)
<i>Other diseases of the digestive system (K90-K93)</i>	
K91.-	Postprocedural disorders of digestive system, not elsewhere classified
<b>Chapter XII. Diseases of the skin and subcutaneous tissue</b>	
<i>Dermatitis and eczema (L20-L30)</i>	
L20.-	Atopic dermatitis (allergic dermatitis, neurodermatitis)*
L21.1	Seborrhoeic infantile dermatitis (eczema seborrhoeic)*
L21.8	Other seborrhoeic dermatitis (eczema seborrhoeic)
L23.-	Allergic contact dermatitis*

L24.3	Irritant contact dermatitis due to cosmetics*
L28.-	Lichen simplex chronicus and prurigo*
L29.-	Pruritus*
L30.1	Dyshidrosis (pompholyx)
<i>Papulosquamous disorders (L40-L45)</i>	
L40.0	Psoriasis vulgaris*
L40.5+; (M07.0- M07.3*, M09.0*)	Arthropathic psoriasis
L43.-	Lichen planus ( <i>excl.</i> : lichen planopilaris)
<i>Urticaria and erythema (L50-L54)</i>	
L50.-	Urticaria*
<i>Disorders of skin appendages (L60-L75)</i>	
L63.-	Alopecia areata
L64.-	Androgenic alopecia
L65.-	Other nonscarring hair loss
<b>Chapter XIII. Diseases of the musculoskeletal system and connective tissue</b>	
<i>Arthropathies (M00-M25)</i>	
M02.-	Reactive arthropathies*
M03*	Postinfective and reactive arthropathies in diseases classified elsewhere
<i>Inflammatory polyarthropathies (M05-M14)</i>	
M05.1+ G99.0*	Rheumatoid lung disease (Caplan's syndrome) (seronegative, in remission)
M06.0	Seronegative rheumatoid arthritis (in remission)
M07.0* L40.5+	Distal interphalangeal psoriatic arthropathy
M07.3* L40.5+	Other psoriatic arthropathies
M08	Juvenile arthritis
M08.0	Juvenile rheumatoid arthritis (seronegative, in remission)
M13.-	Other arthritis (in remission)

<i>Arthrosis (osteoarthrosis)(M15-M19)</i>	
<i>Dorsopathies (M40-M54)</i>	
(M42.+); G55.1*	Spinal osteochondrosis (with radicular algic syndrome)
M43.-	Other deforming dorsopathies
M46.-	Other inflammatory spondylopathies (chronic)
M47.-	Spondylosis (spondyloarthritis)
M48.-	Other spondylopathies
M50.1+; G55.1*	Cervical disc disorder with radiculopathy and neuropathy
M51.1+ G55.1*	Lumbar and other intervertebral disc disorders with radiculopathy and neuropathy
M53.-	Other dorsopathies, not elsewhere classified
M54.-	Dorsalgia
M54.1	Radiculopathy
M54.2	Cervicalgia
M54.3	Sciatica
M54.4	Lumbago with sciatica
M54.5	Low back pain
M54.9	Dorsalgia, unspecified
<i>Soft tissue disorders (M60-M79)</i>	
M60.1	Interstitial myositis (noninfectious)*
M61.9	Calcification and ossification of muscle, unspecified
M62.4	Contracture of muscle (nonparalytic)
M65.8	Other synovitis and tenosynovitis (chronic)*
M70.-	Soft tissue disorders related to use, overuse and pressure*
M71.8	Other specified bursopathies (chronic)
M75.-	Shoulder lesions
M79.1	Myalgia
M79.7	Fibromyalgia
<i>Osteopathies and chondropathies (M80-M94) (except.: M87 osteonecrosis)</i>	
M83	Adult osteomalacia
M91.1	Juvenile osteochondrosis of head of femur [Legg-Calvé-Perthes]*
M93.8	Other juvenile osteochondrosis of hip and pelvis

<b>Chapter XIV. Diseases of the genitourinary system</b>	
<i>Renal tubulo-interstitial diseases (N10-N16)</i>	
N11.8	Other chronic tubulo-interstitial nephritis (nonobstructive chronic pyelonephritis)*
<i>Urolithiasis (N20-N23)</i>	
N23	Unspecified renal colic
<i>Other diseases of urinary system (N30-N39)</i>	
N30.1	Interstitial cystitis (chronic)
N31.-	Neuromuscular dysfunction of bladder, not elsewhere classified*
N34.1	Nonspecific urethritis
<i>Diseases of male genital organs (N40-N51)</i>	
N41.1	Chronic prostatitis
N45.9	Orchitis, epididymitis and epididymo-orchitis without abscess
N46	Male infertility (nonorganic)
N48.0	Kraurosis of penis
N48.8	Other specified disorders of penis (painful coitus, painful ejaculation)
N49.-	Inflammatory disorders of male genital organs, not elsewhere classified
N50.8	Other specified disorders of male genital organs (climacteric syndrome)
<i>Inflammatory diseases of female pelvic organs (N70-N77)</i>	
N70.-	Salpingitis and oophoritis (anexitis)
N71.1	Chronic inflammatory disease of uterus (incl.: chronic endometritis)
N72.-	Inflammatory disease of cervix uteri
N73.1	Chronic parametritis and pelvic cellulitis
N74*	Female pelvic inflammatory disorders in diseases classified elsewhere
N76.1	Subacute and chronic vaginitis

<i>Noninflammatory disorders of female genital tract (N80-N98)</i>	
N80.-	Endometriosis
N81.2	Incomplete uterovaginal prolapse (gr. I-II)
N89.8	Other specified noninflammatory disorders of vagina (kraurosis of vagina)
N90.4	Kraurosis of vulva
N91.-	Absent, scanty and rare menstruation
N92.-	Excessive, frequent and irregular menstruation
N94.-	Pain and other conditions associated with female genital organs and menstrual cycle
N95.1	Menopausal and female climacteric states
N95.2	Postmenopausal atrophic vaginitis
N95.3	States associated with artificial menopause
N97.-	Female infertility (functional)
<b>Chapter XV. Pregnancy, childbirth and the puerperium</b>	
<i>Pregnancy with abortive outcome (O00-O08)</i>	
O08.8	Other complications following abortion and ectopic and molar pregnancy (urinary tract infection)
<i>Oedema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium (O10-O16)</i>	
O10.0	Pre-existing essential hypertension complicating pregnancy, childbirth and the puerperium
O10.1	Pre-existing hypertensive heart disease complicating pregnancy, childbirth and the puerperium
O12.0	Gestational oedema
O13	Gestational (pregnancy-induced) hypertension without essential proteinuria
O14.0	Mild to moderate pre-eclampsia (gr. I-II)
<i>Other maternal disorders predominantly related to pregnancy (O20-O29)</i>	
O20.0	Threatened abortion
O21.0	Mild hyperemesis gravidarum (starting before the end of the 22nd week of gestation)
O21.2	Late vomiting of pregnancy
O26.5	Maternal hypotension syndrome

O26.6	Liver disorders in pregnancy, childbirth and the puerperium (cholestasis in pregnancy)
O26.8	Other specified pregnancy-related conditions (peripheral neuritis)
O29.4	Spinal and epidural anaesthesia-induced headache during pregnancy
<i>Maternal care related to the fetus and amniotic cavity and possible delivery problems (O30-O48)</i>	
O47.0	False labour before 37 completed weeks of gestation
O47.1	False labour at or after 37 completed weeks of gestation
<i>Complications of labour and delivery (O60-O75)</i>	
O73.0	Retained placenta and membranes, without haemorrhage
O74.5	Spinal and epidural anaesthesia-induced headache during labour and delivery
O75.0	Maternal distress during labour and delivery
O75.1	Shock during or following labour and delivery
O75.5	Delayed delivery after artificial rupture of membranes
O75.6	Delayed delivery after spontaneous or unspecified rupture of membranes ( <i>excl.</i> : O42.- spontaneous premature rupture of membranes)
<i>Complications predominantly related to the puerperium (O85-O92)</i>	
O86.1	Other infection of genital tract following delivery (vaginitis, salpingo-oophoritis)
O89.4	Spinal and epidural anaesthesia-induced headache during the puerperium
O90.8	Other complications of the puerperium, not elsewhere classified (subinvolution of uterus puerperal, paralysis bladder sphincter, osteomalacia puerperal)
O92.3	Agalactia
O92.4	Hypogalactia
<i>Other obstetric conditions, not elsewhere classified (O94-O99)</i>	
O99.-	Other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium

<b>Chapter XVI. Certain conditions originating in the perinatal period</b>	
<i>Birth trauma (P10-P15)</i>	
P11.3	Birth injury to facial nerve
P11.4	Birth injury to other cranial nerves
P14.-	Birth injury to peripheral nervous system
P15.2	Sternomastoid injury due to birth injury
<i>Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)</i>	
P27.9	Unspecified chronic respiratory disease originating in the perinatal period
P28.8	Other specified respiratory conditions of newborn (snuffles in newborn)
P29.2	Neonatal hypertension
<i>Other disorders originating in the perinatal period (P90-P96)</i>	
P90	Convulsions of newborn
P91.3	Neonatal cerebral irritability
P91.8	Other specified disturbances of cerebral status of newborn (perinatal encephalopathy)
P92.0	Vomiting in newborn
P92.1	Regurgitation and rumination in newborn
P92.2	Slow feeding of newborn
P94.1	Congenital hypertonia
<b>Chapter XVIII. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified</b>	
<i>Symptoms and signs involving the circulatory and respiratory systems (R00-R09)</i>	
R05	Cough (dry, "nervous")*
R06.5	Mouth breathing (snoring)
R06.6	Hiccough
R09.1	Pleurisy (aseptic, nonspecific)
<i>Symptoms and signs involving the digestive system and abdomen (R10-R19)</i>	
R11	Nausea and vomiting*
R14	Flatulence and related conditions*

<i>Symptoms and signs involving the skin and subcutaneous tissue (R20-R23)</i>	
R20.2	Paraesthesia of skin
<i>Symptoms and signs involving the nervous and musculoskeletal systems (R25-R29)</i>	
R25.2	Cramp and spasm
<i>Symptoms and signs involving speech and voice (R47-R49)</i>	
R47.0	Dysphasia and aphasia*
R47.1	Dysarthria and anarthria*
R47.8	Other and unspecified speech disturbances*
<i>General symptoms and signs (R50-R69)</i>	
R52.0	Acute pain
R52.2	Other chronic pain
R55	Syncope and collapse
R63.0	Anorexia
<b>Chapter XIX. Injury, poisoning and certain other consequences of external causes</b>	
<i>Injuries to unspecified part of trunk, limb or body region (T08-T14)</i>	
T14.0	Superficial injury of unspecified body region (contusion)*
T14.3	Dislocation, sprain and strain of unspecified body region*
<i>Other and unspecified effects of external causes (T66-T78)</i>	
T75.2	Effects of vibration
T75.3	Motion sickness*
T78.3	Angioneurotic oedema (Quincke oedema)*
<i>Complications of surgical and medical care, not elsewhere classified (T80-T88)</i>	
T81.8	Other complications of procedures, not elsewhere classified (shock lipothymia during or after the procedure) (postoperative pain)
T88.5	Other complications of anaesthesia (headache caused by anaesthesia)



<i>Sequelae of injuries, of poisoning and of other consequences of external causes (T90-T98)</i>	
T94.0	Sequelae of injuries involving multiple body regions
<b>Chapter XXI. Factors influencing health status and contact with health services</b>	
<i>Persons encountering health services for specific procedures and health care (Z40-Z54)</i>	
Z50.2	Alcohol rehabilitation
Z50.3	Drug rehabilitation
Z50.8	Care involving use of other rehabilitation procedures (tobacco rehabilitation)
Z51.8	Other specified medical care (side effects of pharmacotherapy)
<sup>1</sup> The list of nosological forms is brought in accordance with the International Classification of Diseases (ICD), the 10 <sup>th</sup> revision WHO [27]. * - the nosological form is indicated for acupuncture treatment, including in children and adolescents.	

### **Relative indications for acupuncture treatment<sup>1</sup>**

<i>Code ICD-10</i>	<i>Nosological forms or conditions</i>
<b>Chapter I. Certain infectious and parasitic diseases</b>	
<i>Sequelae of infectious and parasitic diseases (B90-B94)</i>	
B91	Sequelae of poliomyelitis*
<b>Chapter III. Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism</b>	
<i>Nutritional anaemias (D50-D53)</i>	
D50.0	Iron deficiency anaemia secondary to blood loss (chronic)
<i>Certain disorders involving the immune mechanism (D80-D89)</i>	
D83.-	Common variable immunodeficiency*
D84.-	Other immunodeficiencies*

<b>Chapter IV. Endocrine, nutritional and metabolic diseases</b>	
<i>Disorders of thyroid gland (E00-E07)</i>	
E05.0	Thyrotoxicosis with diffuse goitre (mild or moderate evolution)
E06.-	Thyroiditis
<i>Diabetes mellitus (E10-E14)</i>	
E11	Type 2 diabetes mellitus (non-insulin-dependent) (mild or moderate evolution)
<i>Disorders of other endocrine glands (E20-E35)</i>	
E22.1* N97.8+	Hyperprolactinaemia (Female infertility with hyperprolactinaemia)
E28.2	Polycystic ovarian syndrome
E28.3	Primary ovarian failure
E28.8	Other ovarian dysfunction
E29.1	Testicular hypofunction
<i>Obesity and other hyperalimentation (E65-E68)</i>	
E66.0	Obesity due to excess calories (food obesity gr. I) (metabolic syndrome gr. I)
<b>Chapter V. Mental and behavioural disorders</b>	
<i>Schizophrenia, schizotypal and delusional disorders (F20–F29)</i>	
F28	Other nonorganic psychotic disorders (without symptoms of acute psychotic disorder)
<i>Mood (affective) disorders (F30–F39)</i>	
F33.-	Recurrent depressive disorder (excl.: E33.3 – Recurrent depressive disorder, current episode severe with psychotic symptoms)
<i>Neurotic, stress-related and somatoform disorders (F40–F48)</i>	
F44.-	Dissociative (conversion) disorders (hysteria)
<b>Chapter VI. Diseases of the nervous system</b>	
<i>Systemic atrophies primarily affecting the central nervous system (G10–G14)</i>	
G11.4	Hereditary spastic paraplegia
G12.2	Motor neuron disease (amyotrophic lateral sclerosis)

<i>Extrapyramidal and movement disorders (G20–G26)</i>	
G25.0	Essential tremor
G25.3	Myoclonus
<i>Demyelinating diseases of the central nervous system (G35–G37)</i>	
G35	Multiple sclerosis (initial)
<i>Episodic and paroxysmal disorders (G40–G47)</i>	
G40.0	Localization-related (focal) (partial) idiopathic epilepsy and epileptic syndromes with seizures of localized onset
G44.0	Cluster headache syndrome*
<i>Diseases of myoneural junction and muscle (G70–G73)</i>	
G70.2	Congenital and developmental myasthenia*
<i>Cerebral palsy and other paralytic syndromes (G80–G83)</i>	
G81.0	Flaccid hemiplegia*
<i>Other disorders of the nervous system (G90–G99)</i>	
G93.4	Encephalopathy, unspecified
G95.1	Vascular myelopathies (rehabilitation period)
G99.2* M51.0+	Myelopathy in diseases classified elsewhere (myelopathy in intervertebral disc disorders) (rehabilitation period)
G99.2* M47.1+	Myelopathy in spondylosis (rehabilitation period)
<b>Chapter VII. Diseases of the eye and adnexa</b>	
<i>Disorders of ocular muscles, binocular movement, accommodation and refraction (H49-H52)</i>	
H52.0	Hypermetropia
H52.1	Myopia*
<b>Chapter XI. Diseases of the digestive system</b>	
<i>Disorders of gallbladder, biliary tract and pancreas (K80-K87)</i>	
K86.1	Other chronic pancreatitis (algalic form)
<b>Chapter XIII. Diseases of the musculoskeletal system and connective tissue</b>	
<i>Arthropathies (M00-M25)</i>	
M10.0	Idiopathic gout (gouty arthropathy)

<i>Systemic connective tissue disorders (M30-M36)</i>	
M30.0	Polyarteritis nodosa (peripheral form)
<i>Dorsopathies (M40-M54)</i>	
M45	Ankylosing spondylitis (Bekhterev's disease)
<i>Osteopathies and chondropathies (M80-M94)</i>	
M81.-	Osteoporosis without pathological fracture
<b>Chapter XIV. Diseases of the genitourinary system</b>	
<i>Glomerular diseases (N00-N08)</i>	
N03.-	Chronic nephritic syndrome (without renal failure)
<i>Diseases of male genital organs (N40-N51)</i>	
N48.3	Priapism (painful erection)
<b>Chapter XVIII. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified</b>	
<i>General symptoms and signs (R50-R69)</i>	
R52.1	Chronic intractable pain
<sup>1</sup> The list of nosological forms is brought in accordance with the International Classification of Diseases (ICD), the 10 <sup>th</sup> revision WHO [27]. * - the nosological form is indicated for acupuncture treatment, including in children and adolescents.	

## II. Classification of contraindications of Zhen Jiu therapy

### *Psychological contraindications*

The *Ling Shu* canon notes that *contraindications to all puncture are fear, anger, fatigue...unstable moods*. The *Ode of Superficial and Deep* (1196-1280) states: *Whenever puncturing, the patient's soul is first pacified, only then is the needle inserted. During puncture, Qi is effective only when the soul is calm; until the soul is calm, it cannot be punctured*. The *Ode of One Hundred Symptoms* (1529) points out that *the physician who heals people, without being a strong-willed man, will not be able to cope... The heart must be without fear, free and open*.

Psychological contraindications contain three aspects: the psychological state of the patient, the state of the doctor, and their psychological interaction. Unfriendly attitude, insufficient preparation of the patient for the procedure, and increased psychoemotional sensitivity lead to distrust on the part of the patient and an increase in discomfort. It should also be kept in mind that some patients refuse treatment because of religious beliefs.

### *Physiological contraindications*

The most common physiological contraindications for women are related to the menstrual cycle. During pregnancy there may be a threat of abortion, especially with stimulation of forbidden points and zones. The *Song of the Prohibited Points for Acupuncture* (1601) states: *pregnant women are not allowed to puncture Hegu (LI4) or insert a needle into Sanyinjiao (SP6) – this is the general opinion. They abstain from pricking and moxibustion at Shimen (CV5), otherwise the woman will not become pregnant for the rest of her life*.

Physiological contraindications are overfilled internal organs (stomach, intestines, bladder), when there is a threat of changing the topical relationship of organs with the risk of damaging them during acupuncture.

Physiological contraindications include hunger or overeating, recent sexual relations, conditions after bathing, marked physical fatigue. The *Ling Shu* canon notes that *contraindications to all puncture are recent sexual relations, alcohol intoxication, as well as long-distance travel, unstable moods, and some other circumstances*. The *Ode of Superficial and Deep* (1295) states that *one should be wary of treating patients who are hungry, full, drunk, and tired*. The tractate *Zhen Jiu Da Cheng* states: *If you have recently done hard work, do not apply acupuncture. Do not do hard work immediately after acupuncture. If you have recently had a heavy meal, do not apply acupuncture immediately. If you have just been treated with acupuncture, do not eat too much. If you have been very hungry before, you should not apply the acupuncture. But if you have just had acupuncture, you should not starve. If thirsty, do not use acupuncture. If you have just had acupuncture, then you should not feel thirsty. If you arrived by cart, then you should lie down for a while to rest, and only after that can you begin acupuncture. If the person has come after a long walk, he should sit and rest, only after that can he be punctured.*

### ***Anatomical contraindications***

Needles should not be inserted deeply because of the risk of damage to internal organs, joints, eyes, large vessels, nerve trunks, spinal cord and medulla oblongata, etc. Do not perform direct moxibustion in the area of nipples, genitals, large blood vessels and tendons; use moxibustion carefully in prohibited areas (groin area, fontanelle, etc.). Do not apply cups over large vessels and in the scalp area.

Contraindication of anatomical nature involves taking into account the age of patients, their constitution, the effects of surgical interventions, trauma and burns, the presence of scars. For novice physicians, puncture of dangerous areas (abdomen, eyes, spinal cord, major blood vessels, etc.) should be performed carefully, with strict control of the depth of needle insertion.

### ***Clinical contraindications***

In European countries, the main clinical contraindications to the use of acupuncture are:

- benign and malignant neoplasms (acupuncture has been successfully used to relieve pain and various functional disorders);
- diseases of the blood and blood forming organs (hereditary hemolytic anemia, clotting disorders, purpura and other hemorrhagic conditions);
- acute infectious diseases and febrile states of unclear etiology;
- chronic infectious diseases in the acute stage;
- decompensated diseases of the heart, lungs and other internal organs;
- pneumosclerosis with a tendency to pulmonary bleeding;
- myocardial infarction (acute period),
- active rheumatism; acute inflammatory processes of the musculoskeletal system;
- venous thrombosis and embolism in the acute period;
- sudden exhaustion, physical overexertion;
- frostbite and inflammatory processes of the auricle (auricular acupuncture);
- congenital malformations of the central nervous system.

There are no absolute contraindications to acupuncture and other noninvasive methods. In general terms, the relative contraindications for acupuncture are acute life-threatening conditions, acute surgical diseases, acute psychosis, taking blood thinning drugs (Plavix etc.), pathology of the clotting system, allergy to metal, condition after removal of lymph nodes [47].

The WHO identifies four main contraindications. While not absolutely prohibiting the treatment, it should be used with extreme caution for the following conditions [2]:

- pregnancy (risk of premature birth);

- emergency conditions (requiring treatment with standard intensive care protocols);
- malignant tumors (avoid inserting the needle into the tumor itself, etc.);
- diseases accompanied by bleeding.

The main contraindications to the use of moxibustion:

- febrile illnesses; conditions of red tongue with thick yellow deposit combined with a rapid pulse;
- various inflammatory diseases;
- mental overstimulation, insomnia;
- condition after alcohol intake;
- pregnancy;
- bleeding tendency.

Contraindications for using the cups:

- excessive fatigue;
- severe hunger or overeating;
- marked anxiety of the patient;
- pregnancy and during menstruation (do not use the cups on the abdomen and lumbosacral area);
- skin ulceration in the area where the cups were applied;
- significant swelling;
- blood clotting disorder;
- chronic diseases of internal organs in decompensation stage.

Contraindications for the use of blood drop injections;

- acute infectious diseases;
- purulent skin diseases;
- diseases of internal organs in decompensation stage;
- various bleeding disorders or diseases with probable bleeding (hemophilia, etc.);
- pregnancy period.



## ***Contraindications related to weather factors and seasons of the year***

Since ancient times, it has not been recommended to perform acupuncture during a thunderstorm, as it can worsen the patient's condition and cause unexpected reactions. The *Ode of Superficial and Deep* says: *beware of giving treatments in cold, hot, windy, and cloudy weather... The laws of heaven also get into the seasons. In spring and summer people lose weight, so puncture is made superficially; in fall and winter people gain fat, so puncture is made deeply.*

The contraindications and cautions associated with the different seasons of the year are detailed in *Zhen Jiu Da Chen's tractate: Spring, Summer, Autumn, and Winter have their own places for acupuncture, which determine the directions of needle action.*

### **Contraindications for the application of acupuncture treatment<sup>1</sup>**

<i>Code ICD-10</i>	<i>Nosological forms or conditions</i>
<b>Chapter I. Certain infectious and parasitic diseases (A00-B99)</b>	
(except: A54.2+N74.3*; A56.1+N74.4*; A59.0+N74.8* Sexually transmitted infection; B37.3+N77.1*; B37.4+N51.- * Candidiasis of vulva and vagina; B90.9 Sequelae of respiratory and unspecified tuberculosis (pulmonary fibrosis); B91 Sequelae of poliomyelitis)	
<b>Chapter II. Neoplasms (C00-D48)</b>	
<i>Malignant neoplasms (C00-C97)</i>	
<i>Benign neoplasms (D10-D36)</i>	
<i>Neoplasms of uncertain or unknown behaviour (D37-D48)</i>	
<b>Chapter III. Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism</b>	
<i>Nutritional anaemias (D50-D53)</i>	
(except: D50.0 Iron deficiency anaemia secondary to blood loss (chronic))	
<i>Certain disorders involving the immune mechanism (D80-D89)</i>	
(except: D83.- Common variable immunodeficiency *, D84.- Other immunodeficiencies)*	

<b>Chapter V. Mental and behavioural disorders</b>	
<i>Organic, including symptomatic, mental disorders (F00–F09)</i> (except: F06.7 Mild cognitive disorder)	
<i>Mental and behavioural disorders due to psychoactive substance use (F10–F19)</i> (except: F10.2 Mental and behavioural disorders due to use of alcohol. Dependence syndrome.	
F10.3 Mental and behavioural disorders due to use of alcohol. Withdrawal state.	
F10.6 Mental and behavioural disorders due to use of alcohol. Amnesic syndrome.	
F17.2 Mental and behavioural disorders due to use of tobacco. Dependence syndrome.	
F17.3 Mental and behavioural disorders due to use of tobacco. Withdrawal state.)	
<i>Schizophrenia, schizotypal and delusional disorders (F20–F29)</i> (except: F28 Other nonorganic psychotic disorders)	
<i>Mood (affective) disorders (F30–F39)</i>	
F31.-	Bipolar affective disorder
F34.-	Persistent mood (affective) disorders
<b>Chapter VI. Diseases of the nervous system</b>	
<i>Inflammatory diseases of the central nervous system (G00–G09)</i>	
<i>Episodic and paroxysmal disorders (G40–G47)</i>	
G40.3	Generalized idiopathic epilepsy and epileptic syndromes
<i>Other disorders of the nervous system (G90–G99)</i> (except: G90.- Disorders of autonomic nervous system,	
G93.3 Postviral fatigue syndrome,	
G93.4 Encephalopathy, unspecified,	
G95.1 Vascular myelopathies,	
M51.0+ G99.2* Myelopathy in diseases classified elsewhere,	
M47.1+ G99.2* Myelopathy in spondylosis)	
<b>Chapter IX. Diseases of the circulatory system</b>	
<i>Acute rheumatic fever (I00–I02)</i>	
<i>Chronic rheumatic heart diseases (I05–I09)</i>	

<i>Ischaemic heart diseases (I20-I25)</i>	
I21.-	Acute myocardial infarction
I22.-	Subsequent myocardial infarction
I24.-	Other acute ischaemic heart diseases
<i>Pulmonary heart disease and diseases of pulmonary circulation (chronic cardiopulmonary insufficiency gr. III) (I26-I28)</i>	
<i>Other forms of heart disease (I30-I52)</i>	
<i>Diseases of arteries, arterioles and capillaries (I70-I79)</i>	
I74.-	Arterial embolism and thrombosis
I77.-	Other disorders of arteries and arterioles
I78.-	Diseases of capillaries
<i>Diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified (I80-I89)</i> (except: I83.- Varicose veins of lower extremities, I87.- Other disorders of veins)	
<b>Chapter X. Diseases of the respiratory system</b>	
<i>Chronic lower respiratory diseases (J40-J47)</i>	
J43.-	Emphysema. Contraindicated vacuum massage of the chest, acupuncture with deep insertion of the needles in the chest region in the projection of the ribs and lung apex.
J46	Status asthmaticus (gr. II-III)
<i>Suppurative and necrotic conditions of lower respiratory tract (J85-J86)</i>	
<i>Other diseases of pleura (J90-J94)</i>	
<i>Other diseases of the respiratory system (J95-J99)</i> (except: J98.3 Compensatory emphysema)	
<b>Chapter XII. Diseases of the skin and subcutaneous tissue</b>	
<i>Infections of the skin and subcutaneous tissue (L00-L08)</i>	
<i>Bullous disorders (L10-L14)</i>	
<b>Chapter XIII. Diseases of the musculoskeletal system and connective tissue</b>	
<i>Systemic connective tissue disorders (M30-M36)</i>	

(except: M30.0 Polyarteritis nodosa) (peripheric form)	
<b>Chapter XIV. Diseases of the genitourinary system</b>	
<i>Glomerular diseases (N00-N08)</i>	
(except: N03.- Chronic nephritic syndrome without renal failure)	
<i>Noninflammatory disorders of female genital tract (N80-N98)</i>	
N83.4	Prolapse and hernia of ovary and fallopian tube
N83.5	Torsion of ovary, ovarian pedicle and fallopian tube
N83.6	Haematosalpinx
N83.7	Haematoma of broad ligament
N85.7	Haematometra
N89.7	Haematocolpos
<b>Chapter XVIII. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified</b>	
<i>ptoms and signs involving cognition, perception, emotional state and behaviour (R40-R46)</i>	
R40.1	Stupor
R40.2	Coma, unspecified
<i>General symptoms and signs (R50-R69)</i>	
R57.-	Shock, not elsewhere classified
R58	Haemorrhage, not elsewhere classified
R64	Cachexia
<b>Chapter XIX. Injury, poisoning and certain other consequences of external causes</b>	
<i>Frostbite (T33-T35)</i>	
(except: T33.- superficial frostbite (of a part of the body or limb))	
<i>Other and unspecified effects of external causes (T66-T78)</i>	
<i>Certain early complications of trauma (T79.-)</i>	
T79.4	Traumatic shock
<i>Complications of surgical and medical care, not elsewhere classified (T80-T88)</i>	
T81.1	Complications of procedures, not elsewhere classified

<b>Chapter XXI. Factors influencing health status and contact with health services</b>	
<i>Persons encountering health services in other circumstances (Z70-Z76)</i>	
Z73.0	Burn-out
<i>Persons with potential health hazards related to family and personal history and certain conditions influencing health status (Z80-Z99)</i>	
Z97.8	Presence of other specified devices (cardiac pacemaker)
<sup>1</sup> The list of nosological forms is brought in accordance with the International Classification of Diseases (ICD), the 10 <sup>th</sup> revision WHO [27]. * - the nosological form is indicated for acupuncture treatment, including in children and adolescents.	

### **III. Classification and prevention of adverse events of Zhen Jiu therapy**

Despite great achievements, modern medicine does not yet fully ensure the principle *primum non nocere* – „First, do no harm”. Acupuncture and moxibustion are centuries-old proven methods of treatment and health promotion; in the hands of a qualified physician, they are safe and essentially physiological methods. Nevertheless, in the world literature there are publications dealing with side effects and complications of acupuncture and moxibustion (traumatic, infectious, etc.) [48, 78]. After acupuncture treatment of 73406 patients with various pain syndromes, at least one adverse effect was reported in 5440 of them [72]. The literature indicates that the high level of professionalism of doctors is of particular importance for the prevention of side effects and complications of acupuncture [75, 76]. The number of adverse effects and complications has been proved to depend on knowledge of anatomy and professional training – good training reduces the likelihood of complications; they occurred five times more frequently in physicians with insufficient knowledge and practical skills [15-20, 56, 63]. A doctor who performs acupuncture takes great responsibility (*The needle should be treated like a tiger*).

#### ***Causes of adverse events of acupuncture***

The main causes of side effects and complications of acupuncture are psycho-emotional stress of the patient, ignoring of the treatment regimen, contravention of the treatment technique by the physician and non-compliance with sterility [23].

The ancient treatise *Huangdi Neijing* states the causes of complications associated with improper treatment:

- 1) due to ignorance of the functions of the root points and connecting points;
- 2) insufficient mastery of acupuncture techniques;
- 3) inattention to the patient's condition.

- *Causes of adverse events due to incorrect actions of the physician*
  - lack of sufficient information about the patient's state of health and the nature of the disease (abdominal pain - surgical diseases, pain behind the sternum - heart diseases; presence of artificial joints, prostheses, silicone inserts, etc.);
  - insufficient information for the patient (the physician must inform the patient about the peculiarities of acupuncture as in any invasive procedure);
  - incorrect selection of patients (insufficient examination, underestimation of psychopathological factors, age peculiarities and other factors);
  - contravention of treatment technique (*place, moment, method* of acupoints stimulation);
  - misuse or use of defective technical device (blunted, bent, improperly sharpened needles, etc.);
  - improper positioning of the patient during needle insertion;
  - improper combination of acupuncture with other methods of treatment (medications, physical therapy methods, etc.).
- *Causes of adverse events due to the actions of the patient*
  - change of the initial position during the procedure (moving parts of the body, causing bending of the needle, etc.);
  - hiding a change or worsening of condition (fever, periods (menstruation), pregnancy, etc.);
  - ignoring of treatment regimen (showing up for a treatment procedure with an empty or full stomach, use of tobacco, alcohol, self-treatment with medications during the acupuncture, etc.).

### ***Classification of adverse events***

#### *Septic*

bacterial meningitis, auricular perichondritis, acute suppurative arthritis (pyoarthrosis), local skin infection, abscesses, streptococcal myositis, endocarditis, hepatitis, etc.; HIV transmission through acu-

puncture has not yet been confirmed [24]. Cases of abscess in the temporal region and temporomandibular joint have been described in the literature [23, 24, 45, 52, 78].

*Traumatic*

neuritis, bruises or hematomas, subarachnoid hemorrhage, chest or abdominal wall puncture, organ damage, cardiac tamponade, deep needle insertion and entry into the spinal canal with spinal cord damage, pseudoaneurysm of vessels, etc. [8, 21, 22, 23, 24, 29, 78].

*Exacerbation of chronic diseases*

pustular infections, herpes, convulsions, epileptic seizures, asthma, etc.; some authors consider an increase in symptoms of the underlying disease at the beginning of treatment a positive phenomenon, but a sharp worsening of the condition can lead to an unfavorable outcome.

*Increased pain syndrome*

headaches, etc.

*Complications related to muscle relaxation or spasm*

cramping of the calf muscles, etc.

*Vegetovascular reactions*

loss of consciousness, fainting, collapse, shock, sudden tachycardia or bradycardia, dizziness, drowsiness, etc. [23]. A study in Norway found that more than half of 122 patients experienced states of sleepiness and fatigue that made it difficult to drive [24].

*Skin reactions*

contact dermatitis induced by chromium, nickel, or other metals; allergies to steel, nickel, chromium, silver, wormwood smoke, etc.

*Termination of pregnancy or disorders of the menstrual cycle*

premature birth, delayed/preterm menstruation, etc.

*Psychological and psycho-emotional complications*

euphoria, sleep disturbance, aggravation or simulation of pain, violent laughter or crying, convulsive states, etc.



### ***Frequency of complications***

#### ***Frequent***

short-term impairment of sensitivity in the areas of needle insertion, etc.

#### ***Moderately frequent***

hematoma, pronounced weakness, etc.

#### ***Rare***

skin blisters/burns, sensory disturbances or pain, etc.

#### ***Very rare***

internal organ damage, pneumothorax, infections, etc.

### ***Prevention of complications before acupuncture***

– inform the patient about the indications and contraindications of acupuncture, about possible body reactions to acupuncture, moxibustion or the application of cups; obtain the patient's consent to treatment;

– inform the patient about the therapeutic regimen (not to come to the procedure with an overfilled stomach or bladder, not to drink alcohol, not to self-medicate with remedies, etc.) and the rules of conduct during the procedure (correct, comfortable, calm and relaxed position of the patient, excluding changes of posture during the session);

– carefully study the patient's condition and anamnesis, data of laboratory and instrumental studies;

– take into account different anatomical structures, especially the presence of vascular anomalies; to prevent damage to the heart with a needle, palpation reveals the possible presence of a sternal orifice;

– to prevent infection (*Staphylococcus aureus*, *Herpes simplex*, etc.) study the patient's skin condition; in patients with thin skin or with various skin lesions (sunburn, radiation therapy, etc.) cups are not prescribed;

– in women, the phase of the menstrual cycle and possible pregnancy are taken into account;

- identify patients with systemic diseases, patients with epilepsy (electroacupuncture is contraindicated), patients who have had various surgical interventions, patients predisposed to infection (diabetes, etc.), patients with various prostheses, pacemakers or other electronic devices (especially when electroacupuncture is used);
- identify patients who are weakened and prone to fainting;
- take into account signs of enlargement of internal organs (hepatomegaly, splenomegaly, etc.);
- observe oncological alertness;
- before moxibustion identify allergic predisposition or the presence of chronic nonspecific lung diseases, take into account episodes of short-term high blood pressure, states of depression or euphoria, sleepiness or insomnia, asthenia or increased activity;
- in patients with acute conditions (acute appendicitis, pancreatitis, peritonitis, etc.) acupuncture is prescribed in cases of clear diagnosis, with the participation of a surgeon, cardiologist and other specialists;
- proper planning of combining of acupuncture with pharmacotherapy; take into account possible changes in patient sensitivity after taking medications and caffeine, identify patients who received corticosteroids, immunosuppressants and other drugs that affect the effectiveness of treatment;
- benevolent attitude to the patient, conducting individual psychotherapy.

### ***Prevention of complications during acupuncture***

- treatment is based on the analysis of comprehensive diagnostic data;
- avoid serving a large number of patients at the same time;
- use individual needle sets, follow aseptic rules; for example, in the area of LI19 and LI20 points there are anastomoses with the ocular vein and connection with the cavernous sinus, which dictates the need

for strict compliance with aseptic measures (risk of sinus thrombosis or inflammation);

- observe treatment technique - place, method and moment of stimulation (do not perform rough manipulations with violation of insertion technique, do not rotate the three-edged needle, consider the risk of spot burns in the process of electroacupuncture, etc.) [3, 39, 90];

- before introducing needles, examine the areas to be treated (tendons, muscles, bones, etc.), avoid introducing needles into the area of the neoplasm;

- puncture of points on the abdomen, chest, head, along the spinal cord are done carefully, with strict control of the depth of needle insertion, taking into account the patient's constitution and the thickness of subcutaneous adipose tissue;

- take into account the projection of acupuncture points onto major nerve trunks and plexuses, taking into account the possibility of atypical passage of peripheral nerves; for example, in cases of pronounced pain during stimulation of the LI10 point the needle is slightly withdrawn, avoiding damage to the *n.radialis* trunk; if there is a feeling of electric current, stop needle manipulation in the PC7 point; if the needle is inserted deeply at BL54 point there is a risk of damage to the sciatic nerve (in 20% of cases the sciatic nerve passes through the *m. piriformis*); needle rotation at SI8 point is careful because of the risk of nerve damage; when injecting deeply at LU5 and LU6 points, the needle is not rotated because of the danger of damaging the *n.radialis* trunk; deep puncture of LI13 is contraindicated because of the risk of radial nerve neuritis; ST2 point is punctured, avoiding damage to the *n. trigeminus*; when puncturing the GV16 point in cases of feeling an electric shock in the extremities, the needle is removed immediately, etc.;

- for new patients and the elderly reduce the duration of the first procedure, the treatment is carried out in the lying position; take into account individual sensitivity of the patient to the applied methods of treatment and changes in sensitivity during treatment;

– needle extraction is carried out in a certain sequence, under the control of the acupuncture point prescription used, it is carried out a comparison of the number of needles inserted and extracted;

– if the needle is blocked, violent attempts to retrieve it can result in a broken needle; leave the blocked needle in the tissue for 15-20 minutes to relax the muscles, while at the same time massage around the needle or insert two more needles at a distance of 1-2 cm from the blocked needle. If the needle block is caused by twisting of the muscle fibers (this can occur if the needle is defective), then gentle rotation is needed to both sides to loosen the twisting while slowly retrieving the needle. Extract the distorted needle slowly in the direction of the side of the needle handle tilt, and needle rotation is contraindicated. If the needle is bent due to a change in the patient's position, return the patient to the original position before removing it;

– if a needle breaks, use forceps to remove the broken needle by its visible end. If the broken end is close to the skin, press with the second and third fingers next to the needle so that it appears above the skin and remove it with tweezers (magnet). In some places it is possible to squeeze the needle in the direction of the injection. So, if the broken needle is at TE5 point, you need to press even deeper on this point so that the needle reaches PC6 point. If a needle fragment goes completely under the skin near vital organs or moving parts of the limbs, an X-ray should be taken to determine the exact position of the needle. If the fragment cannot be retrieved, surgery is used (needle fragments can migrate long distances, especially from limb points);

– rest is necessary after the procedure, and excessive physical activity should be avoided immediately after the acupuncture session. Immediately after the procedure you should not drive the car.

### ***Acupuncture adverse events / complications and their prevention***

#### ***1) Psycho-vegetative reactions***

During the puncture of some points (ST9, PC6, GB20, GV26, etc.) various vegetative reactions (nausea, sweating, pale face, etc.) may

occur. To prevent these reactions, the patient's heightened psycho-emotional sensitivity and state of emotional instability are taken into account. For example, during stimulation of LR3 point, short-term irritability may occur; intensive stimulation of VG24 point may cause overexcitation, and stimulation of this point in the evening hours may cause insomnia; prolonged exposure to GB14 point may cause sleepiness; strong stimulation of LR3 and CV14 points can cause verbal excitement; intensive stimulation of PC4–PC8 points can cause short-term psycho-emotional reactions (screaming, irritability, etc.). According to ancient sources avoid puncturing GV10 and GV11 points because of possible damage to *Shen*.

A comparative analysis of the nature of side effects of acupuncture treatment and occlusal splint therapy revealed that the first one causes side effects of the widespread type (sleepiness, relaxation), and the second causes side effects of the local type (salivation disorders, feeling of tension or pain in the teeth, etc.) [37].

To prevent fainting, collapse, shock, and general vegetative reactions, avoid rough needle manipulation, especially at the most sensitive acupuncture points.

Intense stimulation or deep injection of LU2, LU3, LU4, LU7, ST12, BL8, BL17, BL43, BL47, PC9, TE19, GB21, GV23, GV25 and many other points can cause dizziness or fainting, etc. The *Ode of Superficial and Deep* (1196-1280) points out that *during acupuncture treatment, hunger, fear, standing straight or bending over can cause fainting*. The *Song of Prohibited Acupuncture Points* states that *if deeply injected Quepen (ST12) will cause fainting, when deeply injected Jiangjing (GB21) may also cause fainting*.

In the *Ode of Xi Hong*, written in the Song dynasty era indicates *when injecting Jianjing (GB21), it is also necessary Zusanli (ST36), if not injected, Qi is not normalized*.

Puncture of ST9 point may cause dizziness or a sharp drop in blood pressure, there is a high probability of collapse, especially if simultaneous action on ST9 and KI1 points. During puncture of ST9 point, observe changes in skin color, respiration rate and pulse.

If fainting occurred when puncturing the points of the upper limbs, then puncture the points of the lower limbs in addition (ST36, etc.) and vice versa (LI4, LU11). If fainting occurred during puncture of any points on the torso and head, puncture the ST36, GV26, LI4, GV20, LU11 points for emergency aid.

Caution is exercised when puncturing certain points because of the danger of damaging the structures of the autonomic (vegetative) nervous system. For example, incorrect stimulation of SI16, SI17 points may cause damage to the vagus nerve and upper cervical sympathetic node. Deep puncturing of GB20 and GV15 nodes is dangerous because of possible damage to the medulla oblongata.

### 2) *Sensory organs*

Intense stimulation of GB11 and GV22 points may cause or exacerbate tinnitus. Deep puncturing at GB3, GB4, GB5 points can cause hearing loss or bruising. Before puncturing, palpate the superficial temporal artery; if tinnitus occurs during puncture of GB2 and GB3 points, this indicates that the needle has entered a blood vessel.

Intense stimulation of GV24 point may cause visual impairment; prolonged puncturing of ST1 is contraindicated because hyperopia may occur; frequent and deep puncturing of ST2 may cause a blue-yellow tint to the eyes.

### 3) *Muscles and cramps*

In patients with chronic muscle spasms, consider the possibility of involuntary muscle contraction. Intense irritation of the BL57 point can cause cramping of the calf muscle. If necessary, anti-spasmodic acupuncture points are used for cramps and spasms.

Consider the risk of tendon damage, especially if the needle is inserted at an angle; puncturing the tendon of the *m. abductor hallucis* at SP3 and SP4 points is avoided, oblique puncture in the lateral direction at HT4 and HT5 points can damage the tendon, etc.

Electroacupuncture is contraindicated in patients with epilepsy.

#### 4) Spine and joints

When stimulating acupuncture points in the projection of the spinal cord and medulla oblongata, avoid deep insertion and rough needle rotation. Puncture of GV21 point is contraindicated in small children (open fontanelle). Note that the distance from the skin surface to the spinal cord in adults is approximately 22-48 mm, depending on the constitution. The *Song of Prohibited Points for Acupuncture* states that *if the needle enters the brain between the vertebrae, the patient will become hunchbacked*. Possible curvature of the spine (scoliosis, etc.) is also taken into account. According to ancient sources, intense dispersion in the CV23 point increases the risk of spinal curvature, and exposure to the LU10 point prevents this effect.

Carefully stimulate acupuncture points in the area of artificial joints and prostheses. To prevent intra-articular needle penetration, GB2 point is punctured with mouth open; *during GB3 point puncturing, if you yawn, you will harm yourself*. If the needle is inserted vertically into LI15 point, there is a danger of penetrating the shoulder joint; if fluid appears when ST35 point is punctured, it will cause the patient to limp.

In cases of stimulation of joint points, avoid excessive physical activity immediately after completion of the acupuncture procedure.

#### 5) Heart and blood vessels

During stimulation of some acupuncture points, undesirable reactions of the cardiovascular system occur. Patients with very high blood pressure should refrain from puncturing the ST9 point, because immediately after the puncture a short-term pressure rise may occur (light finger massage in the area of ST9 point reduces the severity of palpitation and tachycardia). Acupuncture at ST9 point is performed with a thin needle, without deep insertion or rotation of the needle, avoiding damage to the artery (the artery should be slightly displaced prior to puncture); the needle is not rotated and is removed very gently. In the *Ode of Xi Hong*, written in the era of the Song Dynasty,

it is stated: *if one knows how to stimulate and sedate in Renyin (ST9), let him by no means speak of it to everyone he meets.*

Pulse rate may change during HT9 point puncturing; stimulation of LR3 point may cause change in pulse, decrease in blood pressure; stimulation of GV22 and GV25 points may cause sharp change in vascular tone and decrease in blood pressure; strong stimulation of CV14 point may cause coronarospasm. The ancient *Song of the Jade Dragon*, written during the Song Dynasty, it is stated that *Jiuwei puncturing (CV15) is eschewed.*

To prevent puncture of large blood vessels, bleeding and hematomas, the technique of puncturing the points located over the large vessels (LU9, ST9, ST12, ST13, ST42, SP11, HT1, HT7, BL40, LR12, etc.) is observed, moving parts of the body during the procedure is avoided. Puncture should be performed close to a blood vessel (pulse wave control by palpation), rotating the needle with low or not rotating it; more superficial needle insertion is necessary and after removing the needle, a cotton tampon should be placed firmly against the injection site. In the case of a hematoma, cold is used in the first hours, on the second day - a light massage and a warm compress.

Puncturing the points on the limbs requires taking into account their location along the arterial and venous vessels: LU8 and LU9 points are classified as potentially dangerous to puncturing (*a. radialis*); deep puncture and needle rotation at LI13, HT1, and HT2 are contraindicated because of the risk of vascular damage; lateral oblique puncture at HT4 and HT5 points can damage the artery; to avoid arterial damage, palpate the pulse at the location of the PC3 point (about 25% of people have a superficial brachial artery); when puncturing the LR4 point, avoid damaging the large saphenous vein (if necessary, push the vein backwards with your fingers); avoid deep puncture LR7 (risk of damage to arterial and venous vessels); lateral puncture at LR10 is dangerous because of the possibility of damaging the *a. femoralis*; avoid damage to the artery when puncturing BL40 point (*if the needle hits the popliteal artery, the patient will fall down and turn pale*); avoid deep needle



insertion into SP11, SP12, SP13 points (*a. femoralis*). The Song of the Prohibited Points for Acupuncture states that *bloodletting in Chongyang (ST42) will put one into hell*.

Particular caution should be exercised when puncturing points in the head and neck area. Palpate the superficial temporal artery before inserting the needle at SI19, GB2, and GB3 points to prevent injury; if a pulsating tinnitus occurs during the puncture of TE21 point, this indicates that the needle has entered a blood vessel (palpate the temporal artery before inserting the needle); puncture of ST1 and GB1 can lead to bruising (remove needle at first signs of swelling, apply pressure, and apply a cold compress for 2-5 minutes). Avoid deep needle insertion at LI17, LI18, ST5, ST7, SI16, SI17, TE17, GB20 points because of danger of arterial vessel damage.

Deep puncture at GB21 point is contraindicated in patients with heart disease; pointing the needle upwards at CV15 point may damage the heart, especially if the organ becomes larger; deep puncture at KI23 and ST19 points is contraindicated because of possible heart damage.

Bifurcation of the xiphoid process and the presence of the sternal foramen has the risk of pericardial or cardiac injury with the needle. To prevent damage to the heart, palpation of the sternum is performed before the procedure (the sternal foramen is not always detectable because it may be masked by connective tissue). In the sternum area, short needles are inserted at an angle to the skin surface, especially when stimulating the CV15, CV16 and CV17 points (note that the distance between the skin surface and the back surface of the sternum is about 10-24 mm). In children, vertical puncture at CV16 and CV17 can result in damage to the sternum and penetration into the mediastinum. Monitor the patient's condition for signs of heart damage – chest pain radiating to the neck, shoulder girdle, back, or abdomen, increased pain with deep breathing and coughing, palpitations, drop in blood pressure, general weakness, restlessness, and anxiety.

In the treatment of the patient with coronary spasms you should not treat with the influence on the Gallbladder channel points during

its active time in order to exclude unwanted side effects on the heart (interrelation of channels according to the *Law of Midday - Midnight*).

People with an artificial pacemaker and severe arrhythmia do not use electroacupuncture. There is also a risk of complications in people who have recently had a myocardial infarction.

Acupuncture is not indicated in patients with blood clotting disorders or on anticoagulant therapy.

#### 6) *Chest and respiratory organs*

Avoid puncturing dangerous areas in patients with severe coughing, hiccups and other conditions that contribute to uncontrolled movement of the needle in the tissues. Acupuncture of the thorax points (from the neck to the level of *Th10*, from the jugular notch to the xiphoid appendix) is performed at an angle, to a controlled depth (10-20 mm) with strict observance of treatment technique and use of short needles. Particular caution is exercised when acting on the points of the supraclavicular and subclavicular regions, pericardial points, located along the middle clavicular line. Avoid deep needle insertion into points of increased risk of pneumothorax: LU1, LU2, ST11–ST18, SP21, BL11–BL18, BL41–BL50, KI22–KI27, TE15, GB21–GB25, LR14, CV22 and other points (needle is removed immediately in case of acute pain during inspiration). Deep puncture of LI16 and HT1 may cause rapid breathing or pneumothorax; if GB21 is punctured in a sitting position, the patient should not be left unattended (moving the patient may cause a pneumothorax). Monitor the patient's condition for timely detection of signs of pneumothorax - short and frequent breathing, chest pain, dry cough, cyanosis, sweating. To avoid pneumothorax, smokers, tall men, patients with pulmonary emphysema, patients taking corticosteroids, and patients with significant loss of muscle mass should be *considered at risk*. Analyzing the results of acupuncture use for the period 1981-1994 in 125 scientific publications, it was found that in 3 cases there were fatal outcomes (pneumothorax, endocarditis, bronchial asthma) [49, 69].

Under the influence of deep injection of LU2, LU11, HT9, ST40 points the rhythm and depth of breathing may change; during the puncture of PC6-PC9, LR3 points coughing, yawning or deep breathing may occur. GV28 point puncture with needle abandonment is dangerous because of possible needle aspiration. Strong stimulation of CV14 point can cause hiccups.

At the CV22 point, the needle is rotated slightly without leaving it in the tissue because of the danger of suffocation: *if you insert the needle vertically, you must not press down too hard with your hand, as this would damage the Qi of the five Zang organs and shorten the patient's life.*

Take into account the energy relationship of the channels. For example, strong stimulation of the LU1 point may provoke an asthma attack in patients with the *Upper Burner Deficiency* syndromes.

#### *7) Abdomen and digestive organs*

Deep needle insertion into ST7 point can damage the parotid gland. To determine the optimal depth of needle insertion at CV23 point and to prevent complications, the patient makes several swallowing movements after needle insertion - if the needle moves synchronously with swallowing, the needle is extracted a little.

Deep needle insertion into abdominal points, especially in thin people, can damage abdominal organs. If the needle is directed upward at CV15 point, there is a risk of liver damage, especially if the organ becomes larger. The *Song of Prohibited Points for Acupuncture* states *that a needle entering the five Zang organs and gallbladder causes death.* Avoid deep needle insertion at BL19 point: *if the gallbladder is obstructed, the patient will vomit.* Deep needle insertion into GV1 point can damage the intestines.

Take into account the energy relationship of the channels. For example, if dispersion along the Heart meridian in its active time, the patient may complain of gallbladder pain the next day after treatment (interrelation of channels according to the *Law of Midday-Midnight*).

### 8) *Genitourinary organs and features in women*

Avoid deep needling of BL22, BL23, BL51, BL52 points (danger of kidney damage); deep needling of ST30, KI11, KI12, KI13, KI14, CV2, CV3, CV4 and other points in bladder projection is dangerous (before the procedure empty the bladder).

During the pregnancy, refrain from stimulating points in the lumbosacral area and lower abdomen. *Pregnant women should not be injected in Hegu (LI4) and Sanyinjiao (SP6) - this is the general opinion.* According to traditional acupuncture, LI10 point has a resorption effect on swellings and hardenings in the last months of pregnancy; an injection at BL60 point can cause an absorption; stimulation of BL67, SP6, ST12 points is contraindicated during pregnancy (BL67 point is used to increase fetal activity and uterus contraction; five *Yang* meridians intersect at ST12 point; three *Yin* meridians intersect at SP6 point).

Take into account the energy relationship of the channels: in weakened women with heavy menstruation, it is not recommended to perform intensive stimulation of the LU1 point because of the danger of excessive descending of *Qi* and worsening of the condition; strong stimulation of the SP6 point can cause premature period, especially in women with *Spleen Deficiency* syndrome.

In pregnant women, electroacupuncture is used in special indications with great caution.

Carefully stimulate acupuncture points in the area of artificial dentures and silicone inserts (breasts, lips).

### ***Precautions during moxibustion***

- the heating procedure is carried out in a well-ventilated room;
- during the procedure, take into account the patient's sensitivity to pain and heat; do not perform moxibustion in skin areas with cracks or various injuries; respect the distance to the skin and the duration of heating;

– cautiously apply moxibustion in *powerful* reflexogenic zones, conduct gentle moxibustion in the points in the head area, especially in the evening hours, avoid the zone contributing to *Yang-Qi ascending* (GV20 and others). In people with unstable blood pressure, gentle moxibustion is performed under control of the blood pressure;

– monitor the patient's condition - in case of sudden dizziness, nausea, sweating, pale face, filiform pulse, cold hands, immediately stop moxibustion, allow the patient to lie down, give an oxygen bag and urgently light 3-5 cones on the ST36 point;

– do not use intensive moxibustion in weakened patients and patients predisposed to fainting, in patients with hypertension, increased emotional sensitivity, insomnia;

– observe fire safety, perform moxibustion in the presence of medical staff. Avoid ignition of surrounding materials due to careless moxibustion and leaving the patient unattended (especially when the patient is lying down with needles inserted). It is necessary to be careful when extinguishing a cigarette, because wormwood is characterized by persistent burning, and wormwood cigarette ash, thrown carelessly, can be a source of fire;

– consider forbidden anatomical areas for moxibustion: *eight emptiness* (axillae, inguinal folds, popliteal and elbow fossae), fontanelle area in children, eyeball area, external genitalia, nipples, navel (navel moxibustion is performed through the salt). Dangerous areas for moxibustion are also the face, wrist and ankle joints;

– perform the right choice of acupuncture points and zones, corresponding to the specific disease and the characteristics of the patient (*incorrect moxibustion – useless damage to healthy tissue*). Take into account the intensity of the impact (first use a small cone, and then a large cone; at first burn a smaller number of cones, and then, gradually, increase the number of cones);

– small blisters after moxibustion are usually quickly reversed. In the case of large blisters, they can be punctured with a sterile needle, followed by application of anti-inflammatory ointments.

## ***Adverse reactions/complications of moxibustion and their prevention***

### *1) Psycho-vegetative reactions*

Excessive heating of CV6 and CV8 points can cause thirst, dryness, and a feeling of heat.

In patients with alternating depression and manic state, sleep disorders avoid moxibustion at GV20 point, which contributes to the *Yang-Qi ascending*. Intense moxibustion at this point is not recommended during the evening hours. Do not moxibustion *Suliao* point (GV25) - the *Ode of the Basics of Acupuncture* states that *if wormwood is lit on this point, the patient will snore heavily in his sleep. Moxibustion at LU8 point should be refrained from, as it is detrimental to the clarity of the Shen spirit.*

In the book *Fundamentals of Miracle Moxibustion* (1851) it states: *If dizziness occurs when the fire burns, press again and again with a cold object on the place where the moxibustion was performed [67].*

The ancient sources indicate that *prolonged moxibustion at Diwuhui point (GB42) may cause exhaustion, and intensive moxibustion at Renzhong (GV26) may cause death of the patient.* Moxibustion at GV4 point is contraindicated in cases of a combination of *Yang-Qi Deficiency* and *Interior Heat*.

Immediately after moxibustion it is necessary to relax and rest, refrain from sexual intercourse.

### *2) Sense organs*

Intense moxibustion at TE23 and GV23 points can cause visual impairment.

*Intense moxibustion at GV16 point is contraindicated (it can cause loss of voice); strong moxibustion at Naohu point (GV17) can also cause loss of voice; intensive moxibustion at Yamen point (GV15) can cause aphonia and dumbness, but acupuncture can cure them.*

In acute inflammation of the inner ear and throat moxibustion at SI19, TE17 and TE21 points is contraindicated. To relieve bitterness

and dryness in the throat after moxibustion at BL13 point, moxibustion should be performed at the *Zusanli* point (ST36).

In patients with nasal polyps, moxibustion at the PC8 point is contraindicated because it may enhance their growth. The ancient *the Ode of the Basics of Acupuncture* states that *Suliao* (GV25) - in the middle of the face on the tip of the nose, moxibustion is prohibited.

### 3) *Muscles and cramps*

Moxibustion at CV8 is contraindicated for umbilical hernia. If during CV1 moxibustion discomfort occurs in the lumbosacral area, moxibustion of BL23 and BL32 points is added; and if in the lower abdomen, additionally moxibustion of CV4 and SP6 points is performed.

### 4) *Spine and joints*

Direct moxibustion with scar formation is not applied to the points located in the joint area. In case of joint inflammation, moxibustion in the area of inflammation is avoided. For example, moxibustion at SI9–SI14 points and other points in the joint projection is avoided in cases of brachial scapular peri-arthritis.

Various sources of traditional acupuncture indicate that *intensive moxibustion at GV6 can lead to a hump in the lumbar region*.

The ancient *the Ode of the Basics of Acupuncture* warns that *GV22 moxibustion is contraindicated until the fontanelle closes*.

### 5) *Heart and blood vessels*

Moxibustion of some points can be a danger of vascular damage (LU9, ST8, ST9, ST12, ST13, ST42, SP11, HT1, HT7, BL40, LR11, LR12, etc.). In some acupuncture points (SP12, SP13, etc.) located near arteries very light heating is performed only in cases of extreme necessity (severe *Cold* syndrome). Moxibustion of SP6, KI8, KI9, LR8, LR9 and other points is contraindicated in varicose veins in the legs; moxibustion at BL56 point is also contraindicated in the presence of a marked subcutaneous venous network.

The ancient *Song of the Jade Dragon* states that *one should refrain from moxibustion at Jiuwei (CV15) for more than 7 procedures, as it may cause dispersing of the heart energy and harm to the person.*

In cases of high blood pressure do not perform moxibustion at GV20 point.

#### *6) Chest and respiratory organs*

Moxibustion at GB22, GB23 points is contraindicated because of the possible formation of a carbuncle and its rupture into the pleural cavity (cone moxibustion is not performed).

#### *7) Abdomen and digestive organs*

It is not recommended to perform moxibustion immediately after a meal. Excessive heating of CV12 causes increase of appetite, thirst and insomnia. To prevent complications moxibustion at CV8 point is carried out through a layer of salt. Immediately after moxibustion it is not recommended to eat.

#### *8) Genitourinary organs and peculiarities in women*

According to ancient sources GV4 moxibustion is not performed on people younger than 20 years of age, because there is a danger of excessive amplification of *Yang-Qi* with *Jing* damage; and intensive moxibustion after 20 years of age can lead to sterility. Intensive moxibustion at CV9 point may cause dehydration of the body.

In women it is not recommended to perform moxibustion on the abdomen, below the navel or in the lumbosacral area (particular caution should be taken in the first and last three months of pregnancy), excessive heating of CV6 and CV8 points can cause fever, thirst, insomnia, hypermenorrhea. Strong stimulation of the CV5 point (acupuncture, moxibustion) can lead to sterility: *a woman will not get pregnant for the rest of her life.*

#### ***Precautions during the cupping procedure***

– carefully examine the places where the cups are applied (skin thickness, etc.);



- use sterile and disposable materials;
- choose high-quality cups for use (without jagged edges, etc.), follow the technique of applying the cups and methods of exposure;
- the cups are applied in places with a large layer of muscle and subcutaneous adipose tissue and are not applied to the area of large loose skin folds or scars, as well as on thinning skin (the threat of skin rupture);
- exclude contact of the burning alcohol on the patient's body, carefully wipe off the excess disinfectant solution, there is a risk of burns in case of using the cups again;
- choose an adequate mode of action, avoid too high negative pressure in the cup and long duration of the procedure. Use a sufficient amount of lubricant (oil, vaseline), especially performing cupping (sliding) massage;
- local sensations usually go away a few minutes or hours after removing the cups. Some side effects can be prevented (blistering, itching of the skin, etc.) and some cannot be prevented (headache, general weakness, insomnia, etc.).

***Adverse reactions/complications of applying the cups and their prevention***

*1) Psycho-vegetative reactions*

In order to prevent dizziness, headache and pronounced psycho-vegetative negative reactions, the cups are not applied to weakened patients, in cases of labile psyche and stressed state of mind, as well as to persons with hypersensitivity to pain. Do not perform intensive cupping procedures in patients with risk of fainting. Avoid high negative pressure and prolonged use of cupping in weakened patients, the elderly and children.

*2) Sense organs*

Do not put the cups on the lips, nose and eyes. For the treatment of lesions in the face, mouth, teeth and throat, the cups are placed under the chin. In rare cases, after removal of the cups, within 1-2 days

the skin becomes more sensitive to hot water or a draught. After removing the cups, the skin becomes red and blue spots may appear, which go away within a few days.

### *3) Muscles and cramps*

Use gentle application of the cups in patients with epilepsy or seizure syndromes (epilepsy is a relative contraindication). Do not apply the cups in areas of habitual periodic seizures (lower leg, etc.).

### *4) Spine and joints*

If the joints are inflamed, the cups are used in the area of inflammation without heating or moxibustion. In patients with spinal pain the cups are placed on the back, but not on the spine.

### *5) Heart and blood vessels*

Do not apply the cups in the hemangioma area and in places where superficial blood vessels are clearly visible (danger of their rupture) or where there are large vessels, as well as in the heart projection area (especially dangerous to use the cups together with acupuncture) and in the neck area. Cups are contraindicated in areas with a pronounced subcutaneous venous network (a typical example is the area of BL56 point).

Avoid high negative pressure and prolonged use of cups in patients at risk of bleeding or taking anticoagulants.

### *6) Chest and respiratory organs*

Avoid placing cups over needles at points in the thorax, due to their uncontrolled advancement with increasing depth of penetration (danger of pneumothorax due to sucking and pulling of the skin).

### *7) Abdomen and digestive organs*

Avoid placing the cups over the needles in the points of the abdomen (projection of the liver, gallbladder, intestines and other organs) due to uncontrolled movement of the needles. Do not apply the cups to the anus area.

8) *Genitourinary organs and features in women*

Do not apply the cups to the external genital area, avoid the use of cups in conjunction with acupuncture in the bladder area.

In women avoid the application of cups on the abdomen (with menstrual pain sometimes recommended to put cups on the navel area), lumbar and pelvic area, do not use cups during menstruation, do not use a high negative pressure and prolonged use of cups. Do not put the cups on the nipple area of the mammary glands.

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