

during the second trimester, you can use ultrasound techniques. Conducting additional tests and amniocentesis helps to detect defects of the neural tube formation and chromosomal abnormalities in the first and second trimesters of pregnancy.

Newborn Screening provides for clinical examination as well as screening for hematologic, metabolic and hormonal disorders. Checking on deafness and heart defects, as well as the timely detection of congenital defects may contribute to treatment aimed at saving lives, and prevent the progression of vice, which can lead to some form of physical or mental disability or disabilities related to vision or hearing. In some countries, all newborns before discharge from the maternity ward is screened to identify abnormalities of the thyroid gland and adrenal gland.

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#### METHODS OF REHABILITATION OF CHILDREN WITH CEREBRAL PALSY

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Abstract Rehabilitation activities received much attention at the moment. The optimal development of a child with cerebral palsy can occur only in case of an adequate education, training and rehabilitation. In the case of failure of correctional and developmental work and growing phenomenon of deprivation, the motor, cognitive and personal failure aggravates. The basis of the correction of mental development of children with cerebral palsy, is presented by well-chosen methods of rehabilitation and the joint efforts of the attending physician and parents.

**Key words:** children, rehabilitation, infantile cerebral palsy.

The main feature of the pathology of childhood is the growing prevalence of neuropsychiatric diseases. Effects of hypoxic damage to the nervous system can lead to neurological and somatic disorders, disability, social and professional maladjustment, which makes the problem of medical and social importance [2,5].

The optimal development of a child with cerebral palsy can occur only if an adequate education, training and rehabilitation. Rehabilitation activities received much attention at the moment [1,3,4]. In the event of failure of correctional and developmental work there and growing phenomenon of deprivation, aggravate the motor, cognitive and personal failure.

The purpose of scientific work consists of studying of features of mental development of children with cerebral spastic infantile paralysis and there were researches of ways they rehabilitation.

**Materials and methods.** 14 children aged from 12 months up to 10 years who are on treatment in neurologic office department of Children's City Clinical Hospital Blagoveshchensk were investigated.

Results and discussion. Children were observed in a hospital with the diagnosis of cerebral spastic infantile paralysis, from them at 50% a spastic diplegiya, and other 50% of children have a spastic hemiplegia. The diagnosis of cerebral spastic infantile paralysis of 100% of children was exposed in 1 year.

A survey of parents' stories of disease analysis, an objective examination of children. The structure of mental and speech disorders studied by "Scheme examination skills" and "General Scheme of the psychological examination of the child." Statistical data processing.

Analyzing medical history, determined that all children - preterm (mean gestational age 30-31 weeks), the earliest date of birth - 26-27 weeks. The share of natural childbirth was 70%, and was born by Caesarean section 30% of children. The average weight at birth was 2094 + 156g (minimum weight 800g), the average growth of the newborn - 43 + 2 cm (minimum height 34 cm), the average score on the Apgar score 5/6. The age of mothers averaged 34.9 + 3.5 years. On the one woman he had 3.5 cases of somatic diseases (diseases of the cardiovascular system, upper respiratory tract, digestive tract, and others.) (P=0,05).

Bad habits - 40% of mothers (smoking before and during pregnancy) and 100% of fathers (smoking, alcohol abuse). They do not comply with diet, work, rest and did not use antenatal leave - 82% of mothers (p=0,05).

Complicated obstetric and gynecological history was observed in 82% of women: medical abortions - 78%, cesarean section - 24%, infertility - 13%, spontaneous abortion in early pregnancy - 15,5% (p=0,05). The threat of miscarriage of the pregnancy was observed in 97.5% of women, of whom 45% are marked 2 or more episodes of the threat of termination of pregnancy (p=0,05). During this pregnancy suffered from anemia -

62%, ARI - 78%, preeclampsia in 70% of women ( $p \leq 0,05$ ).

The formula of: bottle-fed children were 80%. The average age of onset of 8.6 months of crawling, walking skill - 1.5 years, the formation of speech - 2 years.

During the investigation it was found that the vertical position of "standing" hold 40%. Move on their own 20%, 50% in a wheelchair, using crutches 30%. In the study skills and cognitive development revealed that easily come into contact 50% of children suffering from cerebral palsy, showing interest to 40%, high activity upon contact 70% ( $p \leq 0,05$ ). The frequency of speech disorders is 80%. In 60% of children are dysarthria ( $p \leq 0,05$ ).

Studied children aged 5 to 10 years are showing lack of lexical and grammatical development. There is a limitation of passive and active vocabulary in 80% of children. The leading hand in 60% of children is a right-hand part of the manipulative function preserved half of the patients. A low concentration of attention and instability observed in 90% of the studied children, 70% observed an inadequate response to the comment, which manifests itself in the form of aggression. Only 20% of children stored operation, and the remaining 80% is severely limited ( $p \leq 0,05$ ). The percentage of children learning disabilities was 60%. The level of development activity: interest in toys show 80% of children own account up to 10 - 30%, the right and left are distinguished - 20%. The stock of general ideas: time of year and day of the week know 20% of children, 80% have difficulty in answering ( $p \leq 0,05$ ). Know the appointment of items related to 80% of patients. Completely personal hygiene (washing his face, brushing his teeth, combing hair) own 30%, partially owned by 30%, and the remaining 40%, they are completely absent. Social skills 30% of children age appropriate.

Rehabilitation activities play an important role in improving the quality of life and rapid social adaptation of children with this diagnosis. On the basis of available DGKB Blagoveshchensk branch of rehabilitation, which includes exercise equipment for kinesitherapy: Lokomat - the method is based on the reconstruction of the outer distance using robotic systems, the aim is to form a lost motion stereotype. MOTOMed- designed for cyclical rotational movements of both upper and lower limbs, various nature of muscle contraction, the pace of implementation and duration. Atlanta - pnevmo overall, which has a positive impact on the child neurophysiology by alternating the dosage pnevmo load on the antagonist muscles and helps to restore the vocal apparatus and speech development. Verticalizer - it is an accessory that allows you to take a vertical position in order to prevent the negative effects of long-stay sitting or lying down. Physiotherapy, which include: electrotherapy, magnetic, Ultrasonic therapy, laser therapy, balneotherapy, thermotherapy, massage and reflexotherapy; sensory room and the psychologist's office aim psychotherapeutic rehabilitation which is a decrease in muscle tone through the use of psychological effects.

Rehabilitation methods are used strictly individual and if indicated, also performed pharmacotherapy: use antispastic drugs that have the least impact on muscle strength and well-tolerated by patients. An effective was the use of botulinum toxin drug rehabilitation activities. The clinical effect of botulinum toxin is based on the reduction of spasticity, contractures preventing the development of pathological and there is an opportunity for patients to further physical and psychological development. Duration and place of injection are strictly individual, depending on the degree of spasticity and clinical diagnosis.

Methods of physical therapy is the main rehabilitation work carried out at home by parents and children, it has a binding principles: regularity, continuity and systematic application of therapeutic exercises; strict individualization of physical therapy exercises in accordance with the stage of the disease, its severity, the age of the child, his mental development; gradual increase strictly dosed exercise.

Rehabilitation of children with cerebral palsy system provides integrated efforts rehabilitators, teachers, psychologists. Much attention is paid to the family, the parents, so creating mikro rehabilitation centers, "corners" in families where a child with cerebral palsy, it is essential and necessary.

Conclusions. The situation is clearly dependent features of mental development of children with cerebral palsy from both the biological factors of the environment and of the social. The development of the child in terms of disease and adverse social conditions have a negative impact on the formation of the child's personality, suffering from cerebral palsy. Thus, based on the correction of features of mental development of children with cerebral palsy, is well-chosen methods of rehabilitation and the joint efforts of the attending physician and parents.

Thus, development of the personality in children with cerebral spastic infantile paralysis in most cases are very peculiar, though under the same laws, as development of the identity of normally developing children. Specifics of development of the identity of children is determined as cerebral spastic infantile paralysis by both biological and social factors. Development of the child in the conditions of an illness, and also adverse social conditions negatively affect formation of all sides of the identity of the child having a children's cerebral palsy.

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## A NEW WAY OF CAROTID-SUBCLAVIAN BYPASS: EXPERIMENTAL - MORPHOLOGICAL STUDY

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**Abstract** The article presents the results of experimental-morphological study on the development of a new method of carotid-subclavian bypass grafting (patent number 2551945 on 11/19/2013). Research was conducted on 15 corpses of  $62,4 \pm 5,2$  years, of both sexes. Study was carried out on the great saphenous vein and the external jugular vein, taking each corpse material in sizes up to 7 cm, fixed in 10% of formalin solution. Great saphenous vein was at the level of the upper third of the leg, external jugular vein was all over from the site to the confluence of the deep venous system supraclavicular access. The first step studied the anatomical and morphological features of external jugular vein, then the macro and microscopic morphological characteristics of external jugular vein and great saphenous vein were determined.

The essential differences between the wall thickness of the two veins have been identified. The third stage was simulated surgery with carotid-subclavian bypass of the external jugular vein as a shunt. The study has proven the ability to use reverse external jugular vein as bypass for revascularization of vertebral-subclavian arterial zones by modeling operations with carotid-subclavian bypass.

**Key words:** external jugular vein (EJV), great saphenous vein (GSV), carotid-subclavian bypass.

**Introduction.** The main indication for surgery carotid-subclavian bypass occlusion is the first segment of the subclavian artery. Currently used as a vascular graft prosthesis of PTFE or Dacron. Constant use of synthetic materials during operations carotid-subclavian bypass and development in 30% of cases of various complications associated with it explants, pushed for an experimental morphological study and the search for new plastic resource. The use of artificial materials leads to a greater number of thrombosis, is short-lived, as well as very expensive. Universal and "deserved" autograft in operations on any blood pool is a large subcutaneous Vienna. Its use as a bypass during coronary artery, femoropopliteal, and some other kinds of "extended" bypass undeniable. However, the use of the GSV during operations on brachiocephalic arteries leads to a lengthening of the time of the operation, an additional surgical trauma and cosmetic defects, but most importantly - lost her reserve in possible future restoration of coronary blood flow and infrainguinal.

In the study and comparison of the morphology of the basin of the superior vena cava and the pool V.N. Vankova inferior vena cava (1974) highlighted a number of unique features. The thickness of the GSV is highly variable, it has a powerful muscle layer, but the small amount of collagen fibers. The superior vena cava system contain considerably fewer muscle fibers, but they are well developed and adventitia collagen fibers. When performing operations carotid-subclavian bypass surgery during mobilization of the second segment of the subclavian artery us was marked by recurring need to cross the external jugular vein. The refusal of many practitioners from using the tributaries of the internal or external jugular vein as a graft is motivated by the possibility of it breaking or formation of aneurysms in the long term. In the A.A. Mazurenko (2003) is a refutation of the possibility of complications associated with the use of facial vein as the plastic material for operations of carotid endarterectomy. These facts have led to explore the possibility of using EJV as a shunt during operations on the vertebral-subclavian arterial zone.

The aim of our research - to prove the possibility of using external jugular vein as autoshunta at reconstructive operations on the vertebral-subclavian arterial zone on the basis of experimental and morphological studies. Thus, to improve the results of treatment of occlusive-stenotic lesions of the first segment of the subclavian artery.

It developed a new method for the reconstruction of the vertebral-subclavian arterial zone in order to improve the results of treatment of occlusive and stenotic lesions of the first segments of the subclavian and vertebral arteries (patent number 2551945 on 19/11/2013).

**Materials and methods.** On the basis of pathology department of the Amur Regional Clinical Hospital studied 15 cadavers aged  $62,4 \pm 5,2$  years old male and female ratio of 3: 1, respectively.