

Tab. 3. Normal morphometric characteristics GSV

Wall thickness, mcm	The thickness of the inner layer, mcm	The thickness of the middle layer, mcm
268,28±14,97	7,45±2,85	237,86±8,15

The next stage of the operation was carried out modeling of carotid-subclavian bypass. Given the fact that the left subclavian artery suffer 2-3 times more often than the right, the operation performed on the left. The optimal access to the vertebral-subclavian area with 2 sides was chosen supraclavicular crossing the clavicular portion of the sternocleidomastoid muscle. Inflows EJV and bandaging the trunk itself and intersect. Cleave all areas adventitious adhesions. Common carotid artery was isolated and a second segment of the subclavian artery. Next simulated surgery carotid-subclavian bypass autovenous reverse EJV. First performed anastomosis with the common carotid artery and then to the second segment of the subclavian artery on the type of "end to side". As the suture material used polypropylene yarn 5/0. The tightness of anastomoses was tested gidronagnetaniem. The lengths of the selected EJV in all cases enough to bypass without tension.

Conclusions. Conducted macroscopic study of cadaver veins have proven the possibility of using reverse EJV as autoshunta for revascularization of vertebral-subclavian arterial zones by modeling operations carotid-subclavian bypass. The efficiency of the operation phase of the experiment is largely determined by the technical simplicity of the implementation of a supraclavicular access and lack of need for the use of explants. The advantages of using this type of shunt, one access, preservation of the GSV for possible coronary artery bypass grafting and other forms, the cheapness and availability of the method.

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PECULIARITIES OF HEMODYNAMICS IN PREGNANT WOMEN WITH BRONCHIAL ASTHMA

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Abstract The incidence of bronchial asthma (BA) in the world is from 4 to 10% of the population; in the Russian Federation, the prevalence among adult's ranges from 2.2 to 5.7%. BA is the most common disease of the pulmonary system in pregnant women, the frequency of diagnosis in the world ranges from 1 to 4%, in Russia – from 0.4 to 13.8%. The aim of this work was to determine the hemodynamic features of the BA course during pregnancy. Clinical and functional features of the course, the outcomes of pregnancy, labor and neonatal status in 35 patients with bronchial asthma were analyzed. Clinical and anamnestic data, the integrated monitoring of clinical syndromes, assessment of diastolic function of the right heart using tissue Doppler imaging, the study of blood flow in the renal vessels and utero-placental hemodynamics were used.

Key words: bronchial asthma, pregnancy, tissue Doppler

The incidence of bronchial asthma (BA) in the world is from 4 to 10% of the population; in the Russian Federation, the prevalence among adult's ranges from 2.2 to 5.7%. In pregnant women BA is the most common disease of the pulmonary system, the frequency of diagnosis in the world which ranged from 1 to 4%, in Russia – from 0.4 to 13.8%. Pregnancy has different effects on the course of BA. Change the course of the disease ranged within wide limits: the improvement in 18-69% of women, a decline from 22-44%, there was is no effect of pregnancy on the course of BA detected in 27-43% of cases. This is due, on the one hand, multi-directional dynamics in patients with different BA severity (mild and moderate severity, aggravation of BA course occurs in 15-22%, improvement – in 12-22%), on the other hand, the lack of diagnosis and proper therapy. In practice, BA is quite often diagnosed only at late stages of the disease. Also, if its beginning coincides with the gestational period, the disease may remain undiagnosed, since observed while respiratory disorders are often attributed to changes caused by pregnancy.

Material and methods. Clinical and functional features of the course, the outcomes of pregnancy, labor and neonatal status in 35 patients with bronchial asthma is analyzed. The observed patients were mature childbearing age – the average age was 25±1.7 years. Hereditary of allergic disease was observed up in 8 (22.8%) of women with BA – in 3 (8,6%), all of them on mother's side. Mild BA (BALT) was observed in 24 (68,5%) patients, moderate (BAST) - 10 (28,8%), heavy (BUTT) - 1 (2.9 percent). According to clinical forms of the disease the patients are divided: in 23 (65,7%) patients with allergic form of BA, 2 patients (5,7%) had non-allergic and in 10 patients (28,8%) – combined. The duration of BA, the average was 9.5±1.3 years.

The dynamics course of BA in dynamics of pregnancy: 22 (62,9%) – were deteriorated from of the disease

and the lack of control in the gestational period, in 8 (22,9%) - no significant dynamics, in 5 (14,3%) – more than mild. It was noted that the worsening of symptoms during pregnancy was in patients with non-allergic and mixed forms of moderate and severe asthma. Among specific significant cause factors were reported more often by polyvalent sensitization to epidermal, drug and pollen allergens, non-specific viral respiratory infections, psycho-emotional and physical stress, exposure to weather conditions. In the structure of extrapulmonary diseases of the atopic circle noted: urticaria in 8 (22,9%), atopic dermatitis - in 4 (11,4%), hay fever – in 6 (17,1%), allergic rhinitis in 5 (14,3%) patients.

BA exacerbation during pregnancy occurred in 16 (45,7%) patients. At the same time, the uncontrolled course of BA for one trimester was in 10 (62,5%) of them, in 2 trimesters - in 4 (11,4%), during all 3 trimesters – in 2 (12,5%).

Results and discussion. When evaluating diastolic function of the left heart in pregnant women with BA flow velocity of early diastolic filling - Em ratio and Em/Am were lower than in healthy individuals ($p < 0,05$), indicating a violation of the relaxation processes due to the increased stiffness of the myocardium. The increased flow velocity of late diastolic filling – Am had no significant differences with the control. The violation of the longitudinal diastolic function of the right ventricle revealed 43 % for IVRT, and 35 % at ET/AT and 58% for MPI in pregnant women with controlled BA and 72 % for IVRT, 64 % ET/AT, 76% and MPI by 18% at TAM(S') in pregnant women with partially controlled BA. Ejection fraction of the right ventricle has not changed - $47 \pm 2,2\%$. Fractional area changed of right ventricle also was remained in the normal range - $49 \pm 2,3\%$.

The study of blood flow in the renal vessels in pregnant women with asthma showed the decline in indicators of: systolic peak velocities (up to 25%) and diastolic flows (up to 32%), at the level of the main, segmental arc and the arteries interlobular; and increased RI and PI in the arc and interlobular arteries ($p < 0,05$) compared with healthy group.

In ultrasonic diagnosis of the changes in utero-placental hemodynamics revealed a difference in the condition of vascular resistance in the uterine artery pool in time for 20-24 weeks gestation. The intensity of blood flow was lower in the observed group, which was reflected in increasing of values of resistance index to an average of $0,64 \pm 0,05$ ($p < 0,05$). A comparison of the values of the resistance index in umbilical artery in pregnant women with asthma and a comparison group showed that a significant difference in performance was noted only in the period 30-34 weeks. The resistance index in pregnant women with bronchial asthma was equal to $0,65 \pm 0,05$, whereas in the comparison group $0,58 \pm 0,04$ ($p < 0,05$). To determine the extent of the violation, the hemodynamic and compensatory abilities of the fetus pregnant smokers with asthma were evaluated Doppler indicators in middle cerebral artery of the fetus. The gestational period of 35-40 weeks in patients with asthma indicators pulsatility index was $1,26 \pm 0,05$ of the middle cerebral artery of the fetus had significantly lower values compared to pregnant group comparison $1,38 \pm 0,03$ ($p < 0,05$).

The development of gestational complications were observed in most cases. So, the threat of interruption of pregnancy observed in 1 (2,9%) case, the development of chronic placental insufficiency (MON) – in 20 (57%), chronic intrauterine hypoxia of fetus (HWUG) – in 20 (57%), gestosis of varying severity in 9 (25,7%) patients. The majority of gestational complications were observed in the uncontrolled course of BA. The majority of pregnant birth occurred in time, preterm birth was noted in 1 (2,9%) of them, for the term of 32 weeks of pregnancy. Complications during delivery were observed in 35 (100%) patients with BA. Cesarean section conducted in 16 (45,7%) patients.

Analyzes the state of the 35 children born from mothers with asthma. The average birth weight amounted to $3168 \pm 110,5$ g. In the structure of the identified diseases of newborns from mothers with BA first rank place is: cerebral ischemia in 16 (45,7%) cases, intrauterine infection (IUI) (infectious diseases of the skin and mucous membranes) – in 12 (34,3%), violation of the period of adaptation – in 6 (17,1%) , intrauterine growth retardation of the fetus (SVRP) - in 2 (5,7%), respiratory distress syndrome (SDR) – in 3 (8,6%), the syndrome of motor disorders - in 6 (17,1 percent).

Conclusions. Thus, to determine the hemodynamic features of the course of bronchial asthma during pregnancy, revealed violations of the relaxation processes of the right heart, changes in velocity parameters in the vessels of the kidneys and uteroplacental system. Thus pregnancy and BA can mutually burden the clinical course that requires special approaches to the management of pregnancy and treatment of the disease.

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MORFOLOGICAL STUDENT PASSPORT - AS A FORM OF MOTIVATION TO A HEALTHY LIFESTYLE

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The department of anatomy of the Amur SMA very interesting and productive form of students research work is the creation of "Student's morphological passport", focused on the study of the parameters of his body and gain of motivation for a healthy lifestyle. Its drawing is carried out in education and outside school hours, and involves research anthropometric data and subsequent analysis of physical development.

Healthy lifestyle - it's a way of life based on the principles of morality, rationally organized, active, employment, tempering and, at the same time, protecting against unfavorable environmental influences, which allows up to a ripe old age to maintain the moral, mental and physical health.

Physical health - is the natural state of the body caused by the normal functioning of all its organs and systems. If you work well all the organs and systems, and the entire human body (self-regulating system) is functioning correctly and develops.

As you know, one of the indicators of health is physical development - the process of quantitative and qualitative changes of the human body in the process of life indicators.

The process of "Morphological passport" is a student in a specific pattern explores their anthropometric characteristics (height, weight, chest circumference), calculates the index of Quetelet and Pine, defining the harmonious development and the type of constitution, the thickness of the fat folds, proportionality limb segments and form, describe the skin drawing fingers, iris, pelvic dimensions, determine arch and more.

To determine the arches of the foot and the manifestation of flatfoot, students make imprints of their feet with the help of the stamp ink on a sheet of paper in a standing position. Then analyze the fingerprint foot graphic-analytical method and calculated Shriver's index, which gives an indication of the arch and on the degree of flatfoot. It should be noted that the flat - a foot deformity characterized by a flattening of the arches and today is one of the diseases of civilization which shows a clear upward trend.

Often formed longitudinal flat feet caused by prolonged physical inactivity on the background of the weakness of the muscles, ligament apparatus the leg and foot, the plantar fascia, which requires strengthening